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ART. I.—*Remarks on the Use of Galvanism in the Treatment of certain Nervous Diseases.* By H. P. DEWEES, M. D., of New-York.

UNTIL late years the diseases of the nervous system have not been well understood, owing to the imperfect condition of physiological science of the time; but since this branch has been so attentively entered into by the first intellects of Europe and of this country, rapid strides have been made towards their elucidation; and although the certainty of remedial treatment has not kept *pari passu* with the improved knowledge of the anatomical distribution and functions of the nerves, yet a very decided step has been gained, if only in putting to flight the barbarous empirical treatments so universally employed prior to these investigations. The field, however, has been entered only by a few, and thus far their labors have not been rewarded by as abundant a harvest as their efforts deserved; yet they have so prepared the ground and cleared away impediments, that further advances must be more richly remunerated.

To the prejudice of advancing knowledge, there has been none greater than is to be found in the arbitrary classifications met with in many of the works on materia medica, the student becoming familiarized with the divisions—in many instances formed without previous clinical observation—long before he is made acquainted with the anatomical appearances, functions and offices of the various parts of the body. It is almost in vain, or at least a Herculean labor, when free from the schools, that he endeavours to shake loose the shackles so early and closely riveted. How frequently do we see this in others, and find it in ourselves. Hence, the *name* of a class of remedial agents is so frequently substituted for, and indoctrinates the pathology of a disease. And, not only to the medical man does it become a bane, as regards the administration of remedies, but also to the patient, who hearing the name of the agent to be employed, imagines it salubrious or lethiferous, according to the established nomenclature of the day. It is to the advances made in pathology, physiology, and organic chemis-

try, that we must look for a more definitely-descriptive division of the materia medica, the bedside being the place for the study of the results of administration, and action of the various agents over diseased conditions.

Before touching on the subject of certain neurotic disorders, and their treatment, it will be necessary for me to say a few words relative to the holden notions of some of the remedies mostly used, and to define the views in opposition to their usual classification, by reference to certain physiological actions and pathological changes.

At the schools we are taught that this remedy is a sedative, this a stimulant, and the other a tonic; or, that some are stimulant and sedative to the same part, according to its state, or to the quantity employed. These doctrines being well impressed, the student proceeds to hear a lecture on the practice of physic, and is continually confused to find a remedy just styled a stimulant employed as a sedative, and then hear discussed the pathology and advised in the administration of agents, the physiological action of which he has been just taught is the very opposite to the one required.

As an instance of this we will take the condition termed "congestion," or where there is an almost complete arrest of the capillary circulation of the part. After general or topical bleeding, if called for, we are told to employ "*counter-irritation.*" The student naturally says, of course the organ congested must be in a state of *irritation*—(the very contrary of which mostly exists)—or why should it be necessary to resort to a *counter* agent? Hence, to him, the name of the remedy becomes the pathology of the part affected. And so he goes on to apply contra-stimulants, etc. After this is well jumbled together in his puzzled brain, he assumes the practice of medicine, and apparently the list of mortality is not much lessened by his being "late from the schools."

Had the remedy, styled "counter-irritant," been called a nervo-stimulant, a ready rationale would have offered itself. The theory I wish to establish is simple, and is the result of practical observations; whilst by it can be dissipated many of the difficulties perpetually starting up, and both pathology and physiology consort with it. The outline must necessarily be short.

The red circulation is carried on by arteries, capillaries, and veins, the heart being a *hæmometer*, as it were, of its just performance, measuring the changes as they take place, and in its turn reacting on them. The action of an artery is contraction, owing to the elastic property of its middle coat. The arteries of the trunk, neck, and head, possess a nervous reticulation derived from the sympathetic; those of the lower extremities from the spinal marrow. The capillaries, as asserted by Schwann, are the terminations of the arteries into the commencement of the veins, their proper tunic being apparently a continuation of the middle and inner arterial coats, and from analogy, together with their highly impressive condition, may be justly supposed to be invested with nerves from the same source, influencing their contractility.

We will now take a case of simple inflammation, and it is necessary to remember the important remark made by Müller, that "Inflammation is not essentially a state of increased action, but is compounded of the phenomena of the *local injury*, a tendency to decomposition in the part, and increased vital action striving to balance the destructive

tendency." At the first stage of inflammation, as seen under the field of the microscope, *contraction* of the vessels with a more hurried circulation in the part ensues, on the principle observed in reducing the calibre of the jet-pipe to a hydrant or engine. After a period, the duration of which varies according to the extent and nature of the lesion and the energy of the part, the vessels begin to *dilate*, the tumult subsides, and one, two or more globules become stationary for a greater or lesser time, and so on, till the hæmastasis is nearly or quite perfect, and the state called congestion in its various degrees presents itself.

In the mean time, the vessels carrying the white corpuscles also become obedient to the same law, and dilate sufficiently to admit the smaller red globules or the *debris* of coloring matter from the broken or dissolved blood discs. A fresh source of deranged action is soon established, till the part is completely infarcted with blood or its component portions, inflammation by *extension* resulting. The serous portion may now infiltrate the cellular texture, or be poured out as in pleurisy, the *cohesive* power of the coats of the vessels becoming weakened, and exudation necessarily following. The normal nutrition of the part at first disordered, now becomes more and more defective, and the *chemical changes* of disorganization commence, the pathological condition varying with the progress of the more or less perfect arrest of the circulation. The parts being over-distended with delayed blood, the walls of the vessels are rendered more and more tenuous, their complete disorganization resulting by progressive absorption; or the plasma of the blood may exude, giving rise to granular formations, filiform or pseudo-membranous extensions. On the borders of the congested patches the obstruction to the circulation institutes fresh irritative action, and as above observed, inflammation by extension ensues, involving more or less the neighboring parts, and impressing on them a condition similar to the originating cause. It is in these very cases the rationale (by referring to what has been said above,) of that treatment can be seen, in which certain remedial efforts are directed towards subduing or arresting the *increasing* inflammation, whilst due regard has to be paid towards the removal of the congestion by other efficient means.

We have now followed out in a rapid manner the changes from a sound to the diseased state; the next thing to be entered into, is the reason why such a condition from some given cause should ensue. In unravelling this we easily approach the indications for treatment, and establish a general law.

Above has been stated the anatomical distribution of nervous fibrils upon the coats of the arteries and capillaries, in the upper portions of the body, derived from the sympathetic, and in the lower extremities from the spinal marrow. It will be necessary to remember that three distinct fibres constitute the sympathetic, viz., organic, sensific and motific. In the beginning of an attack, the morbific cause may be either powerfully *exciting* to the nervous system, its duration varying from a short to a longer period; or it may be that the shock is instantly distributed, the primary charges being scarcely begun, before the secondary ones ensue. If the exciting cause—no matter what—be merely sufficient to induce a violent and continued action of the nervous power, the vessels begin *to contract* (as seen in the early stage of inflammation), and the capillary circulation becomes more rapid and tumultuous, attended by local or general heat, whilst the heart throbs with

quick-propelling strokes, the pulse becoming hard and resisting. After a time, the vis nervosa being exhausted, the vessels become less tense and *incline to return to their normal* state, and provided the exhaustion be not too great, the circulation suffers but little or no further derangement, and a return to health takes place. But if, on the contrary, the prostration of nervous power be greater, the vessels no longer resisting become dilated, the circulation within the capillaries grows more and more sluggish, and the condition known as *congestion* presents itself, its extent varying according to the loss of nervous force and its duration. The states termed by old authors, *active* and *passive* congestion can now be understood, although the first is somewhat miscalled, and does not record the exact condition of the parts at the time.

The indications for the removal of these states of congestion can be readily distinguished; and that such actions ensue as above set down, is confirmed by the treatment found successful in restoring the parts to their normal condition. Let us follow this out. Suppose a case, for instance, in which the exciting cause is cold. Here the cause affecting the peripheral nerves is translated by centripetal action to the lungs, etc. The sudden constriction of the cutaneous vessels is reflected within, a larger proportion of blood than is natural being forced on the inner organs, and the primary stage of inflammation, or the contraction of the vessels ensues, the blood darting through the capillaries with greater rapidity as explained above by reference to the reduction of the orifice of the jet-pipe of an engine, to say nothing of the accelerated motion caused by the increased deoxydization of the arterial blood. If called at this period, the practitioner in common routine practice, bleeds from the arm, or locally by cups and leeches, thereby reducing the amount of circulatory blood, (as it were, allowing the disordered organ to rest) and withdrawing a certain amount of nutritive fluid from the nervous centres, thus directly bringing about the secondary stage, or that of return of the vessels to their normal dimensions, and also by reducing the number of carriers of oxygen—the blood corpuscles; the skin becoming moist and the pulse less tense and frequent. If this stage run no further, or in other words if the nervous power does not fall much below the natural standard, the disease is broken up and a speedy return to health may be predicted. But if the nervous decrement be greater than this, the ordinary stage of *pneumonia* for instance arise, the vessels dilate more and more, the capillaries become choked with the delayed globules, whilst the exudation of the plasma of the blood into the tissue of the lungs and air-cells ensues, and the condition termed red *hepatization* presents itself, the granular deposites varying with the intensity of the previous inflammation, and the quality of the effusion. The secretions becoming changed, chemical actions ensue, and the organic alterations rapidly follow. Here as in all other grave disorders it is difficult to sift out the morbid actions from the sanative efforts exerted by nature; or, as expressed by Müller, to distinguish the phenomena of the *local* injury, and the tendency towards decomposition of the part, from the *increased vital* energy striving to balance this destructive tendency. And hence so frequently is seen amongst injudicious and inexperienced practitioners, the direction of every remedial battery against these very recuperative efforts, instead of the disease.

Such being the condition of the parts, what treatment is found suc-

cessful? We will take sthenic or acute pneumonia. As before observed, if called in at the early onset of the attack, blood is taken from the arm—I refer to the ordinary practice—or from the chest, by leeches. This serves a double purpose, viz., mechanically lessening the quantity circulating through the inflaming and constricted vessels, and directly restricting the nervous excitement, whereby the rapidity of the current and the chemico-organic changes are diminished. Frequently the disease is thus cut short, and, as many times seen in the country after a very large depletion, a stimulant is given a few hours following, under the idea of producing a "sweat." Hot gin or whiskey toddy is mostly the article resorted to, and the patient, if of strong constitution, is about in a few days. How does this consort with the theory proposed. The effect of the bleeding has been already explained, and it is only necessary to recal that by the decided impression of the loss of blood upon the vessels themselves, and the decrement of the energy in the nervous reticulations, the commencement of the second stage of inflammation is directly brought about, viz., the return of the capillaries to their normal calibre. If the bleeding has been carried beyond this point, the vessels become dilated, and thus we can see how a copious bleeding in many instances has been the influential agent in *bringing on* the second stage of pneumonia in a comparatively short time, by inducing "passive" congestion. The stimulant action of gin, whiskey, etc., can now be resorted to, to cause the contraction of the dilated vessels by supporting the lagging nervous power, and probably by the chemical action of the carbon in the alcohol, the combustion of which ensues in preference to, or restrains the too rapid destruction of it in the structures. In hospital practice the general condition of the patients admitted does not demand exceedingly active treatment, owing to the class of subjects, their constitutions for the most part being lowered by excesses or poverty; in these, typhoid pneumonia occurs frequently, and any detraction of blood seems badly tolerated, the nervous power demanding decided support from stimulants, and dietetic adjuvants towards increasing the richness of the plasma of the blood.

We will now turn to the effects of the Hercules of Marryatt and Rasori—tartarized antimony. By many practitioners this preparation is relied upon in preference to depletion, even in the early stage of pneumonia, and doubtless with advantageous result; how can this consort with the theory laid down? The first dose of emetic tartar commonly nauseates or produces vomiting; after a time *tolerance* is gained. Here, by the constitutional effect of the remedy in the first stage, the representative action of bleeding is obtained, viz., the reduction of the nervous excitement causing the constriction of the vessels, by the nausea or vomiting. If the exciting cause has been powerful and the individual plethoric, the remedy is continued in comparatively large doses (accompanied with its nauseating effects), to prevent the access of the nervous excitement, and allowing a freer channel to the circulation by its action on the capillaries. The nauseating or emetic effect is not always the essential agent required, for it is equally successful in other cases without these effects presenting themselves. This can be explained by the greater tolerance in some subjects, and is also owing to the period of the disease, and the *quantity* employed. In large doses it is sedative by the effect on the pneumo-gastrics, causing repeated vomiting; but in *small, repeated doses* it is stimulant. Nor does it differ

in this from many other remedies, in which the quantity regulates the constitutional action, viz., being depressent in large doses, and stimulant in small.

In the fully-formed *secondary* stage of pneumonic inflammation, where benefit has been derived by the frequent administration of antimony in *small* doses, the true action of the remedy must have been stimulant, contrary to the received ideas, the progressive prostration being held in check. By reference to the pathological condition this must make itself plainly evident, so that the same remedy in different proportions acts differently, being sedative or stimulant according to the quantity, and from virtue of this does emetic tartar become such a powerful adjuvant in the various states of inflammation or congestion, its employment requiring accuracy in diagnosis of the pathological condition of parts affected. Where severe vomiting has been caused in the secondary stage of pneumonia, as known to all, great difficulty arises in effecting a cure, and the third stage of suppuration, or yellow hepatization, is ushered in more quickly. And the reason of this must be obvious, viz., the loss of nervous power and greater engorgement, while the blood and the assimilative actions are reduced in their vitality, According to the doctrines so generally taught, we employ tartar emetic as a *debilitant*, and are ordered to continue it in the secondary stage of pneumonia, where in reality this stage is owing to or accompanied by debility of nervous power, as evidenced by the dilated and engorged vessels. The term, then, of "arterial sedative" becomes the pathological index of the parts, the very contrary of which is called for. It is well known to every medical man, that it is not their aim to lower the heart's action *below* the normal rhythm, but merely to regulate it to this standard; it would hardly be fair to suppose that the vessels being already in a *relaxed* state, and the impediment to health partly consequent on this, they would wish to *debilitate* still more, if tartar emetic was a sedative or debilitant *in the doses employed.* Yet there are many who have and do use this remedy under this single-sided notion of its action, thereby evidencing the working of the old leaven of early education, and their perpetual want of regard to the pathological changes and consequent remedial requirements, so constantly under their eyes.

Calomel and opium, as established by Hamilton, being in many cases found serviceable in inflammations, after or together with blood-letting, their action can be well understood; and hence have arisen the schisms respecting the administration, especially of the latter, in pneumonia, its advocates not having clearly pointed out the physiological intention of its administration. We can now understand, that when given in *large doses* after bleeding, in the early stage attended by high nervous excitement, it served to establish the cure by calming the constricted vessels by its sedative action on the nervous centres; and that when administered in the second and third stages in *small* but repeated doses, it acted as a nervo-stimulant, thereby inducing the action required for the restitution of the organ affected, its *sedative* influence being carefully avoided. The lungs being impaired in the performance of decarbonizing the blood, the brain becoming more and more oppressed by its retention, the action of the associated organ—the liver—is invoked, and the specific influence of calomel aids the design.

Let us now pass to another portion of pneumonic treatment, viz:—*counter-irritation*, etc. In the various experiments instituted by Andral

and others on the blood, the *fibrin* invariably was found increased in inflammation, and when found to exist in an undue proportion it might be safely asserted that inflammation somewhere was present. From this fact we can readily infer why *blisters* become such powerful adjuvants in the cure of many diseases, the physiological action of *fibrin* in the support of nutrition being so clearly defined by all writers. Therefore, in place of *counter-irritants*, they should be called *nervo stimulants*, whilst, beside their powerful action over the distal nervous extremities, they really serve to increase the almost exhausted *pabulum vitæ*, the fibrin, thereby by artificial inflammation on the surface aiding to support life, till reaction is awakened. And lastly, we can comprehend why it is, that when blisters are employed at the commencement of *acute* inflammations they serve to add to the existing phlogosis by increasing the fibrin and local nervous energy which is already in a plus quantity. To call them merely revulsives or evacuators of serum *explains* nothing, nor defines any general principle for their employment. In broken-down habits their physiological actions can be readily inferred, or even in those cases of chronic abscess and happening in subjects of comparatively good condition, but where *local atony* is present and consequential assimilative depreciation.

I have at this present time a patient suffering under stricture of the œsophagus, apparently produced by scirrhus. The emaciation and debility is extreme owing to the difficulty of swallowing even the smallest quantity of liquid nourishment. By slightly vesicating with a small blister the strength becomes greater, and the sanguinolent expectoration becomes checked, owing to the increase of fibrin in the blood by the excited inflammation. The experiment has been repeatedly and fully tried, by leaving off the blister, when the strength declines to its lowest ebb, and bloody transudation ensues.

Setons and issues hold a somewhat different position in the scale, although on their first introduction there is always more or less irritative or stimulant action set up. This generally subsides in a short while, and is not often in reality called for, though the doctrine for the general employment would lead us to the contrary. The chief reason for their use is, the withdrawal of a certain amount of nutritive supply so as to *proportion it to the organic force of the injured part.* In the inter-cranial injuries frequently inducing paralysis, a seton is in many cases passed through the nape of the neck; and in some instances is attended with favourable results, in others, with injury or no benefit. And the reason is obvious. Where the constitution is fair, and the brain is not so greatly impaired that its reparative force can be sustained by lessening the tide of nutrition (as it were) flowing to it, then a drain from the vicinity can be established beneficially, in order to make the supply commensurate with the demand.

When the ends of fractured bones do not unite, the periosteum and medullary membrane not being greatly injured, advantage is taken of their *stimulant and irritative* action, in order to invite ossific deposite, the molecular assimilation being rendered more active. After this is well established the seton can be withdrawn, though it is generally retained. But here the seton is passed through the part itself, whilst in other cases it is only near or at some distance from the seat of lesion. No one would think of placing one in the thigh or back, for disunited fracture of the lower leg, with prospect of success,

unless the separation was kept up, by the constant washing away and dissolving of ossific material by over-secreted pus, and then only in a patient of sound constitution.

I will pass to the remedial powers of *Galvanism* in the different forms of paralysis and other disordered states, and shall embrace the subject in as few words as possible.

Owing to the difficulty attending its administration in the early period of its discovery, the trials of its efficacy were greatly limited; and even at this day, when the world is agog with the representations of its wonderful power in curing all diseases under the sun, there has been but little advance made towards its rational therapeutical exhibition, based on physiological principles, or the observation of its effects over certain pathological states. Some years ago I was induced to make a trial of its vaunted powers, in order to be an eye-witness of its agency in the cure of the multitude of diseases accredited to it. The apparatus I commenced with was Pike's galvano-magnet battery, capable of easy adjustment in the regulation of the power. These instruments have been so multiplied, that a description of them would be unnecessary. Disappointment in effecting the radical changes desired, caused me to study out the particular cases in which such a form of applying galvanism would prove beneficial, or where it would be injurious. The *machine* is now restricted in my practice to its power as an *exercising* agent, limiting the duration of its application as may be required by the necessity of the case. To those wishing such an instrument I can recommend the manufacture of Benjamin Pike, jr., or a still more convenient and elegant form, made and sold by D. C. Moorhead, 182 Broadway. The aim of all the mechanics in the construction of their different patents, has been to increase the number of successive shocks in a given time, which in a therapeutical exhibition, for the purpose of their exercising power, should be the very contrary; as any one familiar with their use must have observed, that so far from the muscles receiving the alternate state of contraction and relaxation, they are thrown into a state of great rigidity, the alternation not taking place, as observed in the natural exercise of the parts. This, however, can be better managed by the rack on the side of the instrument. In all this, however, we have but the piecemeal exhibition of the galvanic current as regards its chief remedial value, as the changes which ensue are owing to *electric causation* and not to *the shock*, which, as above observed should only be employed where exercise or a sudden stimulus is deemed requisite. Unfortunately, there exists in the minds of most men, that whatever is powerful, must be more beneficial than anything that is not so strongly manifested to the senses. The experience of trial is only necessary to decide the contest. I therefore prefer and use the *continued galvanic* current, dispensing with the magnet entirely; although by a very simple manipulation the current can be interrupted or continued at pleasure, so that if requisite the spasmodic rigidity or alternate actions of the muscles can be readily obtained. To any person using galvanism, I would again observe, that the degree of benefit must not be thought commensurate with the muscular tension; and this physiological fact should be strongly impressed, that *the organic force is always exhausted by the over-exercise of the functions.*

From these and the remarks previously made in the forepart of this

paper, the treatment required in paralysis of the different orders and other neurotic affections, can be readily deduced, and a less empirical employment of certain remedies (and especially galvanism,) can be established.

The batteries preferred by me are those known as "Smee's," formed of two plates of amalgamated zinc, and a middle plate of platinized silver. In the construction it is an object to regulate the size of the plates, in order to combine sufficient *intensity* with *quantity*, where but one set of batteries are employed. When the muscles are to be solely acted upon, their *exercise* being the desired object, quantity is requisite, but where the organic forces or nutrition of the part are required to be stimulated, intensity is necessary. The passage of the current downward or upward makes every difference. In the paralysis resulting apparently from lesion of organic nerves, or where conjoined with loss of power the arm or leg dwindles, the negative pole should be rubbed over the surface, whilst the positive is attached to the receiver. On the other hand, in *muscular* paralysis, (in contradistinction to the other, which I term *organic paralysis*,) the passage of the current is to be reversed. The investigations of Mattucci showed that there were two currents in the body, and from my observations in practice I am persuaded of the truth of the assertion. One being the muscular and the other the organic current. The results of treatment consort with this, as I find in "organic paralysis" the benefit from the passage of the positive galvanic current upward. Whilst in muscular paralysis a contrary direction is to be preferred. This has been satisfactorily shown to many of the medical gentlemen who have visited me to witness the truth of the statement. The sensation is perfectly distinct also. My usual mode of making this evident, is to place the hand of the person in a copper receiver containing salt water, and having the positive pole attached. By rubbing the exposed back of the hand or arm with the opposite pole a smart tingling or burning sensation is produced, increasing according to the number forming the series, and frequently producing a small papular or pustular eruption. By reversing the poles the burning is scarcely perceptible but the muscular contractions of the fingers are stronger. We may then say, that the nervous nutritive functions ensue more rapidly from the capillary expansions, on the surfaces of the various organs, the tide as it were being from the peripheries upward; whilst muscular propagations take place from centres downward. When the ulnar nerve is struck, the propagation of its influence is downwards to the extremities of the fingers, but in epilepsy, the *aura* always travels upwards. Epilepsy I consider to be the result of disorder in the organic nerves, the nutritive functions being disturbed. On post-mortem examination of epileptics, in some, there has been but little discovered as cause of the disease, where due regard has been paid to the discrimination of the effects of the attacks themselves, in others, the disorder of nutrition is evidenced by the growth or deposite of bone, etc., in anormal situations.

Owing to the nature of this paper, I am forced to be brief and somewhat desultory, touching lightly here and there on subjects, any one of which would form a separate subject for longer discussion. My object is not only to show where a galvanic current, of *proper force*, can be remedially used, but to establish some general principles on which *treatment* in various diseases can be based, not only by the bat-

tery, but by the employment of the different articles of the materia medica. When the nature of a remedy is *known*, much can be gained in the study of those cases in which it formed the curative agent. In galvanism we have this, being properly termed a nervo-stimulant, if then the cases in which this has been successfully employed be duly studied, (referring to the physiology and pathology of the part affected) great light can be thrown on the nature of that or those remedies, over similar states, through whose action the return to health was gained. In so doing, the real classification of medicines would be arrived at and the confusion now existing would be put at rest, whilst the *names* of remedies would not so frequently be thought to indicate the pathology of the disorder. The theory of the practice of medicine can never be rationally or instinctively based until it harmonizes strictly with physiology, pathology and *treatment*.

I will now proceed to "medical galvanism," and point out in a few words, as far as my experience goes, in what cases and under what intentions it should be used.

Nature constantly indicates the mode for curative actions, and the more closely we imitate and interpret her proceedings, having a careful regard to the discrimination between the sanative efforts and the diseased actions, the more certainty will be gained in the result of treatment. We will take a case of paralysis affecting the arm, in which the muscles become flabby and apparently lengthened from their inherent contractility being impaired, whilst the circulation through the tissues is lessened, owing to the impoverished nervous supply, all *voluntary* motion being lost. Friction and strong liniments are applied as vivifying stimuli, in order to accelerate the affinities, (vital or chemical,) by which the due composition of the tissues is maintained. In this manner the organic force is increased, and the influence so given is steadily generated. After a time the muscles become more firm, by the addition of real contractile particles, and the arm begins to recover its lost power, nature carefully regulating its action to the improving condition of the tissues. For in these cases, where recovery takes place, we do not see those violent muscular contractions and spasm ensue, as in simple "muscular paralysis," but the muscular changes and additions are quietly induced, the movement in the arm being at first very slight. In the *continued galvanic* current we have a representative of this reparative force; or in other words, by it the combinations essential to the nutrition of the affected part are produced and sustained, real muscular and other component particles being added. To the vital stimulus of electricity must be attributed the healthful organic changes; but as these are not effected very rapidly, the aim should be not to consume the now enfeebled organic force, by any *over-exercise of the functions*. And this must ever happen when the *machines* are called into use, before these very changes take place.

On the other hand, much benefit has been and will be derived from the *interrupted* current, in those cases where the muscles remain solid, their nutrition not being interfered with, but apparently increased. Here the *functional* exercise of the limb is called for, as a *waste of organic force is demanded in proportion to the supply*. The objective signs, therefore, are of much importance in the treatment, as in some cases of hemiplegia we have the two states existing at one time—the arm being flaccid and dwindled, whilst the leg is firm and even, some-

times larger than that of the sound side. In these cases the brain is mostly implicated, (though not necesarily so,) as the face is frequently paralyzed, and the tongue protruded towards the affected side, the mental confusion being more or less perfect. The *local* treatment in these cases, by the galvanic current, must be adapted to their relative states. The arm must not be shocked, but a gentle *uninterrupted current* should be made to traverse it, the negative pole being applied over the spine and arm, whilst the positive is to be attached to the receiver in which the hand is placed. The leg can be exercised by reversing the current, as above explained. A Pike battery can be used, or the current can be broken at intervals, when using the Smee's batteries. I prefer *pure* galvanism, if it can be obtained, to the exclusion of the magnet. By means of a sponge tied to a plate or handle of silver or other metal, and wetted with salt water, the surface can be wiped over, in order to stimulate every portion alike. The pulse will be found to rise, (unless the application is continued too long,) and the skin become red. In cases of exceeding prostration, where the pulse was extinct, I have witnessed a return of impulse take place in a few minutes, and the sense of weakness fully as well overcome as by the administration of brandy or wine.

The most sensibly-striking phenomena resulting from the application of the continued galvanic current, are the *increased activity of the secretions*, and the reduction of the engorged parts. In all cases of congestion with infiltrative plasma, the normal nutrition of the part is interfered with, and if chronic, the parts are said, in common lanlanguage, to be hypertrophied, although no real nutrition takes place, but an interstitial deposit ensues, increasing the *bulk* of the organ, but not adding any thing to its structural composition. In galvanism we have a ready means of dissipating most of these congestions, and the actions ensue as previously described, viz., the stimulation of the nervous reticulations of the capillaries through the distal extremities, and the consequent return of the vessels to their proper calibre. The reparation of the parts ensues *pari passu;* the absorption of the deposit keeping up with the increasing assimilative process. To measure this disposition to renovation, requires experience and caution, in order to adjust the force, lest the waste by absorption be greater than the plastic renewal, and that the excitability of the part may not become deadened by too long-continued and frequent application. In this knowledge of employing a stimulant, as electricity and others, *to* and not *beyond* its power of renovation, consists the skill of one practitioner over another using the same remedy; the one invigorating, whilst the other causes a tumult in the system, that not only fails to strengthen, but may prove fatal.

From the peculiar action of an intense current, I have proposed its use in those severe exanthematous cases, where the eruption has been suddenly suppressed or has failed to appear, and which are always attended by great nervous depression, having resisted the ordinary rubefacient remedies.

And in those cases of passive hemorrhage from vascular inertia, the contractile power of the capillaries being increased by the stimulus, as is witnessed in certain uterine bleedings. Of course it will be understood that the use of other remedies should not be superseded by the employment of galvanism, but that I am merely stating wherein it may

be found a valuable adjuvant. I early proposed it to restore the nervous power in exhaustion from hemorrhage as witnessed after childbirth, and I am glad to state that it has succeeded, where other stimulus was of no avail.

As an emmenagogue, in cases of simple obstruction or retention, it is a *most certain and powerful remedy*—and again, where the flow has been immoderate, I have received signal benefit from it; the reason is obvious, upon reflecting on what has been said. I have twice favourably resorted to the continued current in threatened abortion, apparently resulting from irregular nervous supply to the uterus, the contractile efforts being calmed by it. Such cases require some experience in being able to discriminate where it would be indicated or prove injurious.

In the most frightful case of tonic spasm from utero-spinal causes, the *continued* current has, in my hands, proved a perfect charm, as witnessed by our distinguished townsmen, Drs. Mott and F. U. Johnston. In this extraordinary case, the *interrupted* current proved highly injurious, causing convulsive actions, whilst by the simple galvanic current, the spasms would be immediately broken. The recital of this case would require more space than is allotted me, but will, at some period, be fully given. In tonic spasm, the patient is generally supposed to be under some great nervous excitement, causing undue muscular contraction or rigidity, according as the flexors or extensors are implicated. According to my views and practical observations in these cases, the very opposite condition presents itself. The flexors and extensors are antagonistic, and their nervous supply may be said to be in like position. Where flexor spasm ensues, the muscles so acted on have only their due supply of nervous power, whilst the extensors are paralytic from nervous loss, and the muscles in such a condition may now be termed in a *plus* state, to the extensors. A galvanic current *prefers* a passage through those nerves in a *minus* state, as it prefers the conduction through *wires* in similar electrical condition. Owing to the passage of the current through the extensor nerves, a return of nervous supply in them is invited, and the *resolution of the spasm ensues when the equilibrium is established.* This has been satisfactorily proved by me to other medical men. On the other hand, where the contrary state exists, viz., extensile rigidity, the members being straightened with their utmost force, the flexor nerves are in a *minus* state, and the breaking up of the attack ensues in like manner when the nervous equilibrium is restored. I have known both these states exist separately, the *consciousness* of the patient being retained. As this is a disorder of muscular nerves, the galvanic current must be applied in such manner that it passes *from* the spine *to* the extremities in the direction of their nerves. I will here call attention to the *excitement consequent on nervous exhaustion*, and but too frequently treated by depletion. In those cases where brandy, opium and other stimulant sedatives could not be given, I have found success from the application of galvanism, proving the correctness of the views of those who have espoused the treatment by the above-named stimulants.

In chronic constipation from enteric inactivity, the result of the application can be readily made out by reflecting upon what has been said of its stimulant power. In many cases it has succeeded unaided by other treatment. There is in most all cases of chronic constipation,

excessive dryness, not only of the fæces but of the mucous surface of the intestines. This state is speedily remedied by the current, the secretion of the bowels being announced in a few days. Where the nervous prostration is very great, and the person be of a relaxed leuco-phlegmatic habit, the gut is frequently found in an opposite condition, being relaxed and coated with a thick gluey mucus, the presence of fæcal matter not being noticed by the bowel. After a few days' use of the battery this becomes remedied in both states, the intestine is stimulated, and a secretion of fresh healthy mucus takes place, with increased propulsory powers. That the increase of the secretion ensues can be readily proved by placing the plates on the opposite cheeks, when the saliva, with its peculiar acidulous taste, (like from slight decomposition,) will be found to flow copiously into the mouth. By reflecting on this and what has been above said, we can deduce this general principle, and its application, that by nervo-stimulation the secretion of a glandular organ can be excited, and that when an organ is inflamed or has an undue nervous supply, its secretions being locked up, that stimulation will prove injurious by addition to the inciting cause, and hence the treatment must be depletory or directly sedative. We can also see plainly the folly of those who employ depletion for the restoration of the secretions of an organ already below par; or who hope to unlock the secretion of any gland invaded by inflammation by *stimulant* remedies.

In the resolution of indurated tumors and glandular swellings I have received great advantage from a galvanic current properly proportioned and from my limited observation, I should think it one of the most potent remedies in the reduction of glandular abdominal enlargements happening in scrofulous constitutions.

About two years ago, I was led to experiment on it in cases of over-mercurialization, under the idea of withdrawing the metal from the system, I tried the first on an Irishman, who had, in the course of a fortnight, taken 24 grs. of the bichloride in combination with hydriodate of potash. In the course of half an hour, I was convinced I had precipitated the metal on my receiving plate. In the second case, I was similarly successful to all appearance. I hope shortly to be enabled to prosecute this more to my satisfaction, and will report if found successful.

To sum up, I will add wherein I have derived advantage from the employment of galvanism. In congestions of the mucous membrane of the throat and fauces. In the early stage of tonsillar enlargement. In chronic laryngitis. In deafness, arising from chronic congestion of mucous lining of the Eustachian tube, etc., from deficiency of nervous energy. In some of the kidney and bladder diseases, from the same cause. In some cases of rheumatism, facial neuralgia, otalgia, etc. In chronic erysipelatous inflammation or congestion of the face. In headache. In dyspepsia, owing to imperfect nervous action. A singular effect is produced after an over-hearty meal, by applying the positive pole over the cervical region of the pneumo-gastric, and the negative over the stomach, when relief is almost immediately afforded.

In several cases where adhesions from periostitis had taken place, I have succeeded in breaking them up; the principle consisted in stimulating the part by which the capillaries and lymphatics should deposit, whilst the veins and absorbents should carry away the old matter.

I have now two cases of atrophy with paralysis of the limbs under charge. In one I have succeeded in inviting nutritive action, the size increasing with return of power. In the other, like changes have gone on with surprising activity, considering the length of time since the beginning of the attack, viz., sixteen years. In this case the right leg is affected, and after having stimulated the muscles by the passage of the *current upwards,* I place on the limb a large tin boot with an elastic band on the top. By means of an exhausting syringe, the air is withdrawn, and the blood is invited into the tissues, in order to take advantage of *the increased organic power* received by the passage of the current. The success attending the operation bears out the intention and reasoning on the subject. In this case, can be beautifully shown the difference of the two poles. By passing the positive current from the spine to the foot, great muscular contraction results—whilst by reversing the order, but slight tension is excited, the surface becoming immediately red, etc.

As regards the question whether the nervous power and galvanism be identical, it may be set at rest as far as remedial application goes. I do not consider them essentially the same, but attribute to the electric passage through certain disordered nerves those nutritive changes necessary to the generation of nervous power. It seems to invite a return of nervous action in the nerves, as it causes the iron to become magnetic, although free from it previous to its passage.

In some cases of amaurosis I have witnessed benefit from it, where other remedies entirely failed.

[To be continued.]

ART. II.—"*Blighted Fœtus,*" a Paper read before the Troy Medical Association, February 25, 1847. By THOS. W. BLATCHFORD, M. D., President of N. Y. State Medical Society.

THE specimen of either "Blighted Fœtus," or "Superfœtation," and which I do not pretend to decide, noticed in our minutes, as having been presented by me, was obtained under the following circumstances.

On the 10th inst. Mrs. W. was delivered of a healthy full-grown child, weighing eight pounds, after a labour of twelve hours, during which nothing unusual occurred, except that the labour was twice as long as her usual labours had been. The placenta followed immediately. It was large and well formed. After-pains being severe, an anodyne was administered, and I left the patient apparently comfortable about eight o'clock, P. M. The next morning, when I made my usual call, the nurse with evidently-suppressed alarm, said she had something curious to show me, which came away about three o'clock, attended at the time with a good deal of pain. She said they had done nothing with it, but had kept it just as it was when it first came away, in order that I might the better judge of its nature. Both patient and nurse seemed anxious to know what it might be. It appeared, however, perfectly to satisfy their curiosity, when I told the patient that she came very near having twins,—that some lucky freak of nature had saved her the trouble of taking care of two babies instead of one. "Good heavens! ain't I glad," she exclaimed. I learned from her that she had always expected to have twins from the first,

that her mother was *twice* confined with twins; her husband's mother had twins, and she herself was a twin. I inquired of her if anything different had occurred to her during her pregnancy, from what she had experienced on former similar occasions. She said she did not at all suspect herself to be in the "family way," until she felt life, and then it was some time before she could believe it, for her "monthly turns" did not discontinue until one or two months after quickening, and once or twice she had been "very much so." She did not remember at what particular period these profuse discharges took place. It should be remarked that Mrs. W. had lost her last child within a week after its birth, from imperfect closure of the foramen ovale, and that she did not keep her milk as she was requested to do.

The specimen is about the size of a large hen's egg, with a protuberance on one extremity partially covered with hair, and the size of a pigeon's egg, or it may be said to resemble a trunk without extremities, having a head without a face. The umbilical cord is perfect, being about five inches in length, and of the size of a crow-quill, attached to a regularly-formed umbilicus. The placental attachment of course I could not ascertain, and whether it was to a separate placenta of its own, or to the placenta connected with the living child was doubtful. The nurse says that she is confident no "lump or afterbirth" came with it; she thinks she should certainly have seen anything of the kind. None has appeared since that time, and this is the sixteenth day since the accouchement.

The mass consists of *integument*, healthy in colour and consistence, *muscular fibre*, *bony matter* and *hair*. To the lower and back portion, or that portion opposite to the umbilicus, were attached thin transparent bladders of a watery fluid, resembling a hydatid formation. Upon viewing this formation, the question seems naturally to arise, may not this hydatid formation account for this production? or, in other words, was not this originally a regular case of twin conception, in which, at an early period of gestation, a hydatid, or hydatids became attached to one of the twins, and without destroying its vitality, interrupted or entirely suspended the *formative* process, causing another process to be set up, adapted to the new condition of things. I confess I am inclined to the affirmative of this question. For had it been an instance of superfœtation, that is, pregnancy upon pregnancy, there must have been, it seems to me, a distinct ovum, and we should have had the *placental mass* as well as the *chick*, although it is true this may have eluded our observation. Again, is there, in reality, any such thing as "superfœtation?" Much has been written upon the subject, pro and con, and the question, like many others connected with generation, still remains an unsettled one, and perhaps always will. Dr. Lopez read an elaborate paper upon the subject of "blighted fœtus" before the Medical Society of Mobile, which may be seen in the October number for 1846, of the Amer. Jour. Med. Sci. In it, he also treats at length the subject of "superfœtation," and although he inclines to the belief in its reality, he concludes his labours with the following remark:—"In conclusion, I will say that I have done no more than sport, as others have done, over a wide field of conjecture.—And after all, when we shall have exhausted ourselves and others, what has been accomplished? Literally nothing. Causâ latet vis est notissima." I confess, however, that as yet, to my mind,

there is at least one weighty objection to the doctrine not yet answered, and that is, its being opposed to the analogy of organic nature in its entire range, both animal and vegetable. I am not aware that there is any thing here to support it, even in the slightest degree. All her generating processes appear to move on under the guidance of certain fixed laws into which the possibility of superfœtation would throw disorder and confusion, at least it seems so to me.

This production which we are now considering, I am aware differs in some particulars from most, if not all the instances of blighted fœtus to which I have been able to refer since my attention has been particularly called to the subject. It differs in having the integuments of a natural colour and consistence, and also in being exempt from the almost uniformly *compressed* appearance of such productions. But this only shows that it must have been protected by an amniotic fluid, either within a membrane of its own, or partaking in common with that of the perfect child. It differs also in the entire destitution of all human features. In most cases of blighted fœtus, some vestige of arm, leg, or face, is traceable, but in this production, if we except the hair and the skin, there is nothing that would lead any one to suppose it was of human origin.

Besides the very interesting paper to which I have already referred, the August number of the same journal for 1840, contains a valuable article on fœtal diseases by Dr. W. C. Roberts, now editor of the Annalist, in which some interesting facts bearing on this subject, may be found. Likewise, in Dr. Montgomery's excellent treatise on the signs of pregnancy. To them, and kindred authors, I would refer any who desire to investigate such instances of "Lusus Naturæ," casting in this mite for what it is worth, in elucidating the great principles of medical science. While on this subject, allow me to narrate another singular case, which without doubt was a clearly-marked instance of blighted fœtus. I mentioned the case at the time it occurred, to several of my medical friends, some of whom are here to-night, and will doubtless remember it.

In the latter part of July, 1842, I was sent for in haste to see Mrs. V., who was represented to be "flowing badly." She had been married about nine years, and this was the third occurrence of the kind which had taken place; she had also given birth to four healthy children.

I found her much exhausted from the loss of blood, and learned that it was three days since the commencement of the discharge, but until within an hour, it was so slight, that she had about persuaded herself that it would pass over without amounting to any thing serious. The hemorrhage having in a measure ceased, I contented myself in strictly enjoining rest and quiet in the horizontal posture, directing cold drinks, and administering a few grains of saccharum saturnis and opium. I proceeded to examine the clot to find the fœtus, which the friends said had certainly "come away." After a diligent search, however, I could discover nothing like one. Some of the clots at first appeared fibrous in their structure, but upon breaking them down, I could not satisfy myself that any thing like either fœtus or placenta had yet passed away.

She observed the directions rigidly and patiently, and lost very little more blood, although there was not a total suspension of the discharge

until two or three weeks after the period of quickening. After that period, she began cautiously to move around her room, gradually increasing her exercise until she took her accustomed degree. After this, nothing of importance occurred during gestation; she was confined at the expected period with a healthy but small child, after a labour unusually tedious for her. After the detachment and expulsion of the placenta, after-pains set in with a good deal of severity, and they were not much relieved by anodynes.

Two mornings after her confinement, I was presented with a shrivelled, dark-coloured fœtus, about four inches long, hard and somewhat distorted, as if it had been long compressed. Much curiosity was manifested by those in the room, to hear how I would account for so strange an occurrence, which I attempted by telling them in substance, that probably at the term of her expected miscarriage, she was pregnant with twins, that from some unknown cause, the vitality of this little shrivelled gentleman (it was a male fœtus) was destroyed, and of course its further development arrested. An effort of nature was then made to rid the womb of this useless burden, but being unsuccessful in the attempt, the only remaining alternative was resorted to. The womb exercising the power almost peculiar to itself, of not only preserving the mass from putrefaction, but actually converting it into an inoffensive substance, to be expelled at the period of maturity originally determined upon.

The friends, as is usual on such occasions, seemed desirous of knowing whether such a case had ever before occurred in my practice. I told them frankly I had never seen one, but that there were similar cases on record.

Since this occurrence, and especially since perusing the excellent paper of Dr. Lopez, above referred to, the question has forcibly presented itself to my mind, whether these productions of interrupted fœtal growth are not of more frequent occurrence than physicians have hitherto been aware of. Every practitioner, of only a moderate share of experience, must have met with cases of pregnancy where hemorrhage, more or less severe, occurs about the second or third month, threatening immediate abortion, but in which after watching the case with all due diligence, he is unable to satisfy either himself or his patient, that an ovum has not escaped, neither is he able satisfactorily to answer the oft-repeated and often puzzling question:—"Dr., do you think I am in the family way," and especially so, if the sanguineous discharge keep up, which it is very apt to do either constantly or at irregular intervals. But, by-and-by, certain movements will settle the question without the doctor's help, gestation proceeds to its termination, and a healthy, full-grown child is born at the period of maturity.

Now, may not some, if not most of these perplexing cases be originally cases of twin conception, in which from some unknown cause, the vitality of one of them becomes destroyed, and the uterine alternative to which reference is made above, is resorted to, in order to protect the system from further injury?

In such cases should physicians make a more thorough examination of the secundines and clots following delivery, which sometimes come away in great quantities, and are often so unceremoniously hurried out of sight, might we not oftener find a satisfactory cause of the untimely

hemorrhage, and save ourselves from an occasional feeling of chagrin? I ask the question, leaving it for others to answer if they feel so disposed, hoping, however, that the hint given, may lead practitioners to make the necessary observations. Verbum sat sapientibus.

ART. III.—*Remarks on the Nourishment of the Fœtus.* By WILLIAM P. GIBBONS, of Poughkeepsie. [Submitted as an Inaugural Thesis for the degree of M. D., in the University of New-York, Session of 1847.]

1. WITH what profound interest do we regard the history of our race, and mark the great periods which have given origin to discoveries and inventions, affecting its advancement in civilization and refinement?

2. To the philosopher, that quietly labours in the fields of science, belongs the honour of presenting materials to society, which have established its improved superstructure. While his genius lends a never-failing aid to the acts of life, his researches always contribute to the intellectual wants of his race.

3. Not content with investigating the laws which govern the physical world, he detects the invisible elements of nature, and follows them through the ever-varying combinations, which impart variety of form, structure, and function of organized matter.

4. Thus we find recorded as history, that which a short time since, was considered as speculative philosophy, and inscrutable to the comprehension and wisdom of man. The laws of his own organism have been demonstrated, and the subtle play of affinities that ensues as a consequence of vital action, displayed with beautiful simplicity.

5. Every department, pertaining to the animal economy, has thus been made the subject of scientific remark: and organic chemistry, from the impulse imparted to it by a few great minds, has attained a degree of importance which places it among the most interesting and precise departments of science.

6. In this brief essay I purpose to consider the theories of fœtal nutrition, and to apply established principles, in explanation of some of the phenomena, connected with the subject.

7. To the structure and relation of the membranes of the pregnant uterus, it will not be necessary to refer, except so far as may be indispensable to our arguments.

8. "The first connection which exists between the ovum and the decidua, consists in the ramified villi of the chorion becoming imbedded in the hollow canals which traverse the decidua. The villi extend through these canals in the manner of roots, and thus draw nourishment from a maternal structure, without having any organic connection therewith."*

9. According to Weber, in the human subject, the vascular villi of the fœtus dips into wide blood vessels, which arise from the uterine system, and which permeate the whole uterine portion of the placenta; the looped capillaries of the fœtus being bathed, as it were, in maternal blood. The ends of the villi are formed by the inosculating loops of the minute arteries and veins of the fœtus, which, however, have the

* Müller, p. 844.

distinguishing character, that the same vessel makes several turns from one loop into another, before it enters the nearest venous trunk. Thus the structure consists essentially of two sets of vessels being brought into the closest possible contact.

10. After this connection between the fœtal and maternal system is established, the blood vessels of the former absorb nutriment from those of the latter; and this enters directly into its circulation. The relation thus maintained between the two, supplies the process of respiration to the fœtus, or is an equivalent for that process.

11. After the blood circulates through the fœtus, it returns to the placenta, "loaded with carbon," where it meets with oxygen. The ultimate disposal of the carbonized blood is not defined by any authors that I have consulted, except in very general terms. "The fluids of the fœtal and maternal portions of the placenta, suffer an interchange with each other." This carbonic acid, of course, then, must be discharged through the venous system of the mother.

12. Prof. Draper refers the supply of oxygen for the venous blood of the fœtus, to exosmosis from the maternal system. As this gas is now believed to exist in a state of solution, in the blood.

13. This constitutes the only system of fœtal nutrition to which much importance is attached. I will now proceed to the argument.

14. *The secretion of the liquor amnii.* This liquor has a decided alkaline reaction, the indications of which disappear, when the test paper is dried. Simon attributes this to the presence of free ammonia. A specimen of the pure liquor, which I examined with reagents, gave indications of ammonia. Two analyses of Colberg, gives as its constituents:

Water, - - - - -	980·0	977·0
Solid constituents, - -	20·0	23·0
Albumen, - - - -	9·0	12·0
Urea, - - - - -	0·5	
Alcohol, extracts and lactates,	2·0	3·0
Fat, - - - - -	2·0	3·0
Chl. sodium, - - -	4·0	4·0
Phos. of lime, - - -	0·3	

To which ammonia may be added.

15. The products of respiration are CO^2 HO and NH^3. Being excretory products, they are thrown off from the system; the NH^3 through the urine, the water and CO^2 by the lungs, skin and urine. But the fats are classed among the respiratory foods. Most of them are formed by a combination of stearic and margaric acids with glyceium,* and in the reactions which occur between these acids and a base, they give up water.

16. According to Meuries, an adult man in the course of twenty-four hours, gets rid of 2,880 grs. of water by expiration; Abernethy fixes the amount at 4,320; Thompson at 9,120; Hales at 9,792; and Lavoisier at 13,704 grs.†

17. Taking the average of these, we will have 7,843 grs. every twenty-four hours. Commencing now, from the beginning of the fifth month of pregnancy, when all the membranes of the womb are completed, and fat, horny tissues, etc., begin to be developed; we will assume the weight of the fœtus to average three lbs. to the time of

* Simon, p. 69. † Simon, p. 118.

parturition, or for a period of four months. This will be one-fiftieth of the weight of an adult. And if we suppose that the respiratory functions of the mother and child bear a corresponding ratio to each other, then 156 grs. of water should be formed by fœtal respiration every twenty-four hours, or about thirty oz. during the whole of the above period.

18. The cutaneous exhalation and sweat are true secretions.* Seguin, in a series of experiments which he made, in order to ascertain the quantity of matters lost by exhalation, arrived at this result:—that the mean loss in a minute, is eighteen grs. of which eleven pass off by the skin, and seven by the lungs.† If we refer the secretion of the liquor amnii to the skin, a greater amount will be derived than by the process suggested in ¶ 17. This will fully account for the source whence the liquor amnii is derived; for we shall hereafter endeavour to show that the function of fœtal respiration is entirely independent of the mother.

19. That all the changes consequent on conception may be produced, without attributing to the blood vessels about the womb any new function, or any action which the vessels in other parts of the body do not occasionally assume, will next be considered.

20. When conception takes place, there is a universal tendency of the blood to and about the womb. This followed by a secretion of coagulable lymph in the uterus which, becoming organized, constitutes its membranes.

21. This is nothing more than what occurs to a greater or less extent, in all local inflammations; in some, morbid secretions and false membranes are produced; while in healthy inflammatory states, those secretions constitute a part of the recuperative action.

22. Hence the principal distinction between local inflammation which occurs in different parts of the body, and the stimulus imparted to a pregnant uterus, consists in this:—that the secretion, in the latter case, continues for a long time, without reflecting any morbid action to the surrounding parts.

23. *Nutrition of the fœtus.*—About the expiration of the fourth month of pregnancy, the formation of all the membranes may be considered completed, and they assume their respective functions. The circulation in the fœtus is established, and its nutrition and growth steadily promoted by the nutritive fluids.

24. "In the adult structure, nutrition is effected through the coats of the capillaries, and the process consists in the fluid parts of the blood permeating their parietes, while the solid particles are visibly carried on into the veins. The albumen and fibrin dissolved in the liquor sanguinis, being the principal materials for nutrition."‡

25. The presence of oxygen is necessary to the perfect development of the blood corpuscle. And though iron is a constant ingredient, yet it is now conceded to be neither essential to hæmatorine, nor necessary to the color of the blood.‖

26. Anatomical investigations have shown that it is impossible for the blood of the mother to be transmitted unchanged into the fœtus;

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* Müller, p. 459. † Ann. de Chim., t. 90. Müller, p. 456.
‡ Pereira on Food and Diet. Scherer, Recherches Exp. sur le Sang Humain.
‖ Müller, p. 470.

nutriment and arterial blood can only make their way into the fœtal system through the medium of cells.*

27. But it has never been demonstrated that arterial blood from the maternal circulation makes its way into the fœtal vessels. Neither is there any physiological principle that would lead us to suppose that such is the case. On the other hand, we know that in chemical operations, a membrane will separate the coloring matter from a fluid, while passing through it. When we can account for any effect that is produced in the organism, by the operation of established laws of the animal economy, we are not justified in resorting to theories which have a tendency to obscure, rather than simplify, the great operations of nature.

28. The first effects of conception on the maternal system have been stated in ¶ 20. And physiologists agree that these secretions are colorless. "If the substance of a pregnant uterus be compressed, a thick whitish fluid exudes from the surface of the decidua."† It is reasonable to believe, that the further development of the membranes and the fœtus is continued, on precisely the same principle that they were commenced. And they should be carried on in accordance with the principles of nutrition stated in ¶ 24.

29. From these premises I assume that the substances which nourish the fœtus are the albumen and fibrin which are transmitted through the nucleated cells of the placenta into the vessels of the fœtal system, and that the corpuscles of the fœtal blood are formed and perfected by its own vital action.

30. If the fœtus received its blood corpuscles from the mother, it would follow that the size of those corpuscles would be the same in both systems. But according to Mecker, they are smaller in adult animals than in the fœtus.‡ Prevost and Dumas have also found the red globules in the embryo to be larger than those of the adult animal.‖

31. The manner in which blood corpuscles are formed from the lymph is not known. Physiologists suppose that a capsule "which is at first very thin, but which subsequently becomes thicker and thicker, is developed around the lymph corpuscle; this capsule is filled with hæmato-globulin, which is at first comparatively colorless, but subsequently assumes a vivid red tint."§

32. For the metamorphosis of these protein substances (¶ 24) into the various tissues of the fœtus, nothing more is required than the presence of oxygen. According to Mulder the fibrin, oxidized in the lungs, is the principal, if not the only vehicle in which this gas is carried through the system. This is based on the fact, that oxygen is absorbed by fibrin, and converted into a tritoxide of protein, with one equivalent of which it easily parts while passing through the capillaries. Prof. Draper, on the other hand, refers the supply of O to the fœtus, as stated in ¶ 12. It is a matter of no importance to our argument, which of these theories be adopted; as in either case the O will be supplied to the fœtal circulation.

33. From the foregoing premises then, the nutrition of the fœtus

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* Simon, p. 119. † Müller, p. 845.
‡ Mecker's Anat., I., p. 24. ‖ Müller, p. 146. § Simon, p. 132.

may be deduced, as being derived from the albumen and fibrin, and oxygen, which pass from the maternal into the fœtal system, through the nucleated cells of the placenta.

34. *On fœtal respiration.*—The experiments of Sir H. Davy, Magnus, and others, to determine the amount of carbonic acid excreted from the system, were confined to the quantity thrown off from the lungs. It is known, however, that the skin also discharges it, and that it is discharged through the urine, in combination with saline bases. Simon considers it probable that free carbonic acid is a normal constituent of the urine. A number of experiments which I have made tends to confirm this view. Hence, then, we have in the adult three channels for the excretion of free carbonic acid from the system, and one for the carbonates.

35. We will now compare this relation with the respiratory apparatus of the fœtus. The lungs do not take in any function; and the urine, if any, is not in sufficient quantity to have any appreciable effect. The carbonic acid must all appear, either as a secretion from the skin, or in the capillaries of the placenta. In the former case it would be held in solution by the liquor amnii. But from experiment I have not been able to detect it, in a very pure specimen of this liquid. We therefore look to the placenta for an explanation of the results of fœtal respiration.

36. The accepted theory supposes the venous blood of the fœtus to discharge its carbonic acid through the uterine capillaries, or for the venous blood itself to pass into the maternal circulation. There are no facts with which we are acquainted that can sustain this supposition.

37. It has already been stated, that a direct communication exists between the fœtal arteries and veins in the placenta (¶ 9). Let us now look at the circumstances under which carbonic acid would escape from the fœtal circulation.

38. The capillaries of the inside, and those of the outside surface of the placenta, are close to each other. The constituents of the blood of each are the same, but the relative proportion of those constituents differ. The venous blood of the fœtus does not contain so much carbonic acid as that of the mother. And when they come into proximity it is not reasonable to suppose that the blood, containing the *least* proportion of carbonic acid, should give up a portion to those vessels containing a *greater* quantity. The other supposition, that the venous blood itself passes into the maternal circulation, is still more objectionable, for, if the blood corpuscles of the mother cannot pass into the fœtal system, how much more impossible is it for those of the fœtus, which are larger, to pass into the maternal circulation.

39. The essential act of fœtal respiration is not to oxidize the carbon of its blood, but to oxidize its protein, as suggested in ¶ 32. For I contend that the amount of carbonic acid generated in the fœtal system is exceedingly small, from the fact that the development of the child is purely a process of nutrition. Hence there are no effete particles to be removed. We never find nature, when forming an organ, to assimilate materials which are not absolutely required for its develment; and then, by a reflex action, immediately to destroy the superabundant structure.

40. But an objection may be urged, that fœtal blood is known to contain carbonic acid. So it does; and so does the arterial blood of an adult. This is necessary in both cases; for the different organs of the body are differently constituted. There are some highly-carbonized products in the system which could not be formed from arterial blood, were there no free carbonic acid present. No less than five per cent. of the mass of the brain is composed of different fats.* The liver and bones of the fœtus also make a large demand on the carbonic acid of the arterial blood, for their structure. Hence, then, the position, that there is no more carbonic acid in the circulating fluids of the child than is necessary for the wants of nutrition.

41. It may furthermore be said, that the fatty matters of the body are not generated, but that they pre-exist in the food, and are taken up by the capillaries in a state of solution. In part, this is unquestionably true; and it is also true, that the process of nutrition is not a mechanical one. Though the proximate elements of every part of the system may exist, ready formed in the blood, yet the vital action of each organ consists, not merely in the power which its cellular structure may possess, of absorbing particular products from the blood, as it circulates through it, but of modifying the elements of those products, so as to form a substance simulating to its own composition.

42. To suppose that the simple cellular structure of the leaves of plants have the power of forming fatty compounds, while this same function is suspended in the more highly-organized animal system, is at variance with that great arrangement of nature, where we see the same structure and function preserved with scrupulous fidelity in all the orders of animated existence—from the simple polypi to the complicated fabric of the human system.

43. Do the musk tribe (*moschus*) gather from their food the substance that is so peculiar to them? Does the musk ox (*ovibus muschatus*) derive his odor, the beaver (*castor fiber*) his castoreum and rancid oil, the skunk (*mephitus Americana*) his intolerable glandular secretion, directly from the food on which they live? And, coming nearer home, is the odor of the negro a product of his food? The presence of these principles in some animals, while others, feeding on precisely the same kind of nutriment, have nothing analogous in nature, manifests, beyond doubt, the existence of a modifying, formative action in the living organism, which is peculiar to it, and it alone. Precisely on the same principle, that the pine tree will produce its aromatic gum, the maple its sugar, the tobacco its narcotine, all standing side by side, depending on a common soil and a common fluid for their nutrition and growth.

44. *The temperature of the fœtus.*—From the foregoing views it would follow, that as there is but little oxidation going on in the fœtus, its temperature should be lower than that of the mother. In the adult, rapidity of circulation is productive of an increased amount of heat. But the blood of the child circulates with much greater rapidity than that of the mother. Auteureith and Shultz have shown that the fœtus has but slight independent warmth†—a circumstance which favors the above supposition. While the increased rapidity of circulation may

* Simon, p. 615.

† Experimenta circa calorem fœtus et sanguinem. Simon, p. 125.

be referred to the greater relative amount of oxygen contained in the protein, which is absorbed into the fœtal circulation. (¶ 28.)

1. From the foregoing views we deduce the formation of the membranes of the womb by the secretion of the oxides of protein, from the local excitement consequent on conception.

2. That the metamorphosis of the blood into the various organs and tissues of the body is accompanied with a secretion of water, which is discharged either by the skin of the fœtus or the inner surface of the placenta, and constitutes the liquor amnii of the womb.

3. That these oxides of protein continue to be secreted after the fœtal circulation is established, and enter the vessels of the umbilicus as the nutritive fluids of the child.

4. That the metamorphoses of these into red blood is produced within the circulatory system of the child.

5. That the fluids of the child do not find their way back into the maternal circulation.

6. That the function of fœtal respiration does not consist in a combination of carbon and oxygen, but by a combination of this latter gas with the partially-deoxidized protein of the blood.

7. That the carbonic acid found in the fœtal blood is an essential ingredient for the formation of particular parts of the system.

8. That the slight independent warmth of the fœtus proves that there is but little combustion of oxygen in its system.

ART. IV.—*Case of Exsection of the Head and Surgical Neck of the Os Humeri.* By WILLIAM WATERS, M. D.; read before and communicated by the Æsculapian Society of the University of the City of New-York.

ON the 22d of September, 1846, Samuel T. Henry, in the service of the Baltimore and Ohio Rail Road Company, while acting as breakman, the car upon which he was stationed, struck a box that threw it off the track, and he was precipitated between the rails, when four cars passed over him. A projecting iron rod or bar (supposed to be a part of the break) beneath the cars, pierced the posterior margin of the axilla of the right arm, divided the teres minor and wounded the teres major and tendon of the latissimus dorsi muscles. The rod passing through the arm and out on the inner margin of the deltoid and outer margin of the great pectoral muscle, immediately below the coracoid process of the scapula, between the deltoid and short head of the biceps. The cephalic vein was torn where it passed between the inner margin of the deltoid and great pectoral muscles. The os humeri was fractured in the surgical neck, at the insertions of the latissimus dorsi and the great pectoral muscles; also below obliquely between the insertion of the deltoid and origin of the brachialis anticus muscles.

The right forearm was stripped of integument in front, extending from midway to near the carpus, and winding around the radius between the index-finger and thumb, laying bare the flexor tendons and in part the muscles. The muscles being slightly lacerated, the tendon of the flexor carpi ulnaris being torn out, leaving a part of the muscle pending from the wound, that required removal.

His left foot was crushed by a wheel passing over the metatarsal

bones near their connection with the tarsal. The internal cuneiform bone was crushed on the anterior surface where it joined the metatarsal of the great toe. This injury required the tarso-metatarsal amputation.

A wound of the scalp over the os frontis for four inches or more existed, with a crack or fissure in the os frontis, one inch and a half in length, just beneath the margin of the hairy scalp. Several wounds on his face down to the bones were incurred, besides other minor wounds about his person.

The arm produced decidedly the most pain, the os humeri was adjusted with loose dressings and the forearm surrounded with dry bran, which arrested the hemorrhage of the forearm, as it was copious after reactions from the free use of stimulants and anodynes. The shock was great to his nervous system, having lost a good deal of blood from the wound over the os frontis before being brought to town. Having also gone through the amputation of his foot, he required anodynes and stimulants for the first twenty-four hours. The cephalic vein oozed rather freely, was checked by dry bran and slight pressure.

September 23d, had a restless and painful night with his arm, no fever in the forenoon. Afternoon, slight fever. Prescribed epsom salts as a cooling aperient and to be followed by Dover's powders and morphine if necessary to allay pain.

September 24. High fever with delirium. Prescribed saline cathartics in such doses as to keep up an action on the bowels. Fever very high at night, requiring four and five persons to keep him in bed. Bladder of iced water to be applied to his head, and frequent cloths wet with iced water to his shoulder and arm.

September 25. Better, but fever continues with traumatic erysipelas of the scapular region, shoulder and down the right side of the chest. Aggravated no doubt by his efforts to force himself out of bed in his delirium last night. Continued the cold dressings to inflammation with occasional use of Velpeau's solution of the sulphate of iron. Dressed forearm with linseed poultice, and also wounds of the head and face. Prescribed broken doses of epsom salts.

September 26. The arm having rested on a bran bag, was placed on an inclined plane upon a bench across his chest; fixed so as to elevate or depress at pleasure the arm without touching the erysipelatous parts, being confined on his left side. The least motion would produce great pain of his arm, but perfectly easy when he would keep quiet. I therefore had an angular splint excavated for the arm and forearm, with cushions of bran for the whole arm to rest upon. This apparatus was suspended from above with buckles to eight straps, which gave an accommodating power to the degree of elevation and more latitude of motion, without displacement of the fracture. A moderate fever was treated by inclined plane of the arm, cooling aperients, anodynes to allay pain, which his excessive restlessness made more necessary, cold cloths of iced water, and solution of sulphate of iron with linseed poultices to forearm, etc.

September 30. Fever moderate, swelling over the scapula increased, and has a livid appearance extending from the posterior margin of the axilla for four inches over the scapula towards the spine of the scapula. Great pain along the right side of the neck requiring free use of morphine.

October 1. Very much swollen over the scapula; still great pain along the right side of the neck. Fever moderate and more irritative in the afternoon. Had trismus this morning, soon subsided under use of anodynes. Yeast poultice to livid spot on the scapula, previously sprinkling the part with Peruvian bark. Prescribed sulphate of quinine every forenoon.

October 4. Opened an abscess over the scapula about two inches from the base, and also an inch from the spine of the scapula through the gangrenous spot. The surgical neck of the bone projected upwards and inwards an inch below the coracoid wound from the commencement. This ulcerated through the integuments, making an opening two inches long below the coracoid process with the neck of the os humeri projecting at an angle of 35 degrees. The end was sawed off and bone reduced, but soon assumed the former angle of projection through the wound. The spinati muscles with the subscapularis acting, produced this projection of the surgical neck; as the antagonist, the teres minor muscle, was divided. A decoction of Peruvian bark and elixir vitriol given in the forenoon, when he was free from fever, but there was some irritative fever every afternoon.

October 6. Opened an abscess over the chest, two inches from the right nipple below the great pectoral muscle. The discharge here was small, but very profuse from the scapula. The collections of pus proceeding from phlegmonoid erysipelas. His countenance improved, not so haggard or Hippocratic. All inflammation having subsided for some days, made another attempt at reduction. Reduction easy, but impossible to keep the surgical neck in place. It projected through the wound at the same angle. Continued the bark, anodynes, and laxative condition of the bowels, with more generous diet.

October 10. Having made several attempts at the reduction of the surgical neck of the bone, prior and subsequent to the reduction of inflammation. The surgical neck projecting with five cracks, four of which extensive. The periosteum being off from the greater portion of the neck. The patient being somewhat improved by tonics and increase of diet, yet laboring under some irritative fever every evening, with considerable pain at times, requiring the daily use of anodynes to procure sleep, and that in short and broken intervals. The position all along being on the left hip or side, with his arm resting upon a suspensory and angular splint; for weeks the skin over the crest of the ileum, trochanter major, and thigh, have been and are excoriated; although now improved from keeping pressure from the sore points. Doctor A. Ritchie concurred in the opinion of exsection of the head and neck of the os humeri in preference to amputation. This being the only truce in the condition of his system when the knife was not contra-indicated by either alarming debility or inflammation and free suppuration. Assisted by Dr. Ritchie, Mr. Charles F. Percivall and Charles Boyce, the latter students of medicine, we proceeded to operate.

An incision was made from the acromion process for four inches through the skin and deltoid muscle to the shaft below, a second incision from the lower end of the first, to the lower end of the sub-coracoid wound, carried obliquely upwards, making an irregular V flap. This flap of skin and deltoid being raised, gave entire command of the capsular ligament of the shoulder-joint. That being entered the supra and infra-spinati tendons with the teres minor were divided with a

blunt-pointed bistoury behind, then the long head of the biceps and subscapularis tendons on the inner side, separating the attachments of the neck with a scalpel. The head and neck being removed, the shaft below had some rugged points which were sawed off transversely, and the margins removed by bone forceps. A cloth being previously placed under the shaft to prevent saw-dust and spiculæ from entering the soft parts. A branch of the acrominalis, the posterior and anterior circumflex arteries sprung, but did not require a ligature. Torsion only was used. The wound was dressed with sutures and adhesive strips; by which the anterior coracoid wound was reduced much in size by an approximation of parts, in which the margins of the deltoid and great pectoral were destroyed to some extent by the projectile rod in the accident. Nearly a grain of morphine was given in the course of the evening, and half a pint of French brandy through the day in the form of toddy, and panada to relieve the cold surface and debilitated pulse, following the operation. He then had the best night's sleep for eighteen days or since the accident. A slight fever followed on the 11th and 12th instant, but never afterwards. The bark and acid were omitted for some days.

October 19. The os humeri was splinted on the 16th for the middle fracture. His pulse being weaker, countenance pallid, and perspiration heavy: prescribed the bark and acid several days ago. Anterior coracoid wound closing rapidly, but discharging freely. A slippery elm bark tent introduced daily into the posterior wound of the axilla, to drain from beneath the deltoid. Discharge free from slough wound over the scapula. Forearm and foot healing rapidly. Wounds on the head and face well. Suffers more from excoriations over the ileum, trochanter major, and thigh, than from his more serious wounds.

October 20. Omitted the suspensory splint, and applied first part of clavicular bandage and pad: with a roller over the forearm, to retain lint dressings and prevent swelling, which is healing rapidly. Tendency to syncope from placing him on another mattress, and turning him from his left side on his back, although the horizontal posture was observed. He required brandy toddy for an hour, to keep up and restore reaction.

October 21. Wounds of the scapula and below coracoid suppurating more freely. Discharge from the scapula too thin and flakey yesterday, more laudable to-day. Improving. Two ounces of decoct. Peruv. with vit. acid, at 6, 8, 10 and 12 o'clock daily.

October 25. An opening occurred an inch below the spine of the scapula through the deltoid muscle, within the slough wound, which discharged a very offensive matter. Improving. Elevated him, lying on an inclined plane slightly. Tonics continued, with porter, jellies, oysters, toast, crackers, &c.

October 26. Improving. Directed his meals to be taken while elevated on an inclined plane, to prevent deposits of matter, and favour exit of pus from posterior axillary wound. The discharge through the deltoid ceased in a few days.

November 4. More restless with pain of his shoulder and slight erysipelas around the scapula wound; forearm more swollen with erysipelas on the back of the hand. At night had to turn him on the left side again. Reopened the opening through the deltoid muscle,

and infra-spinatus. These muscles were tumefied over the scapula. Half a teacupful of offensive pus issued from beneath the deltoid, which communicated with the glenoid cavity. At this opening, a tent of slippery elm bark was introduced, which reached near the cervix scapula, and was continued daily, until a consolidation of parts occurred between the glenoid cavity and shaft of the os humeri. Next morning swelling and erysipelas over the scapula and hand had subsided.

November 28. Removed splints from the os humeri, which has united firmly. The tonic course, with a free use of anodynes, was continued to the middle of January, 1847. He suffered considerably from neuralgia in his arm, chest, and other sound parts of his body; there was great exalted sensibility of the chest, with a sense of stricture in full respiration, making it necessary to keep the roller slacker, fastening the pad under his arm. This gradually disappeared under the tonic course, and towards the close of treatment, gum asafœtida soothed his nervous system more than morphine largely given, or in combination with hyosciamus.

He departed for Baltimore on the first of February, 1847. On the 20th of the same month, I received a letter from him, written with his right hand very legibly. Stating his general health good, wounds all healed, except the scapular tent hole. Flexion of the fingers good, flexion of the wrist, pronation and supination impaired. Flexion of the forearm impaired. The shoulder not reported, but could by support of the hand carry the elbow from his side *six* inches. The right os humeri is two and one-fourth inches shorter than the left. The bone removed, measures exactly *four* inches, including the head.

ART. V.—*Notes of a rare Case of Epilepsy in a Female.* By ALBAN SMITH PAINE, of Paris, Virginia.

I ACCIDENTALLY encountered, some time since, what I regarded as an interesting case of chronic hydrocephalus in a female laboring under epilepsy, and have determined to lay before the medical profession, through the columns of your valuable Journal, a plain statement of some of the phenomena witnessed by me during her epileptic paroxysms. With your permission, I will also state all I have as yet gathered of her previous history from communications made to me by her mother.

Should you deem it a case of sufficient interest, I will endeavor (after collecting all the facts) at a future day, to give you a more extended account.

At 11 o'clock, p. m., Dec. 22, 1846, I was called to see Mrs. O—— threatened with hemiplegia. I found her a very intelligent old lady; and after her alarm for herself had somewhat abated, she requested me to examine her daughter's head, "and see," said she, "if you ever saw any thing like it before." I turned around, and for the first time, beheld her daughter seated in a rocking-chair. Without advancing towards her, I noticed two things; 1st, the quiet and inoffensive manner in which she sat; 2dly, that peculiar apathetic, or epileptic expression of countenance which, added to the unsymmetrical shape of her head, I looked upon as so unerring a diagnostic, that I at once re-

marked, "Madam, your daughter has fits." "Yes, but feel her head, and see if you ever saw the like before." I did so, and to my surprise, found a large collection of fluid beneath the dura mater, the two parietal bones separated all along their sagittal suture, and the anterior fontanelle as perfect as in the infant. A separation all along the lambdoidal suture could also be discerned. The pulsation of the middle meningial, or middle artery of the dura mater, (I cannot say which) could be distinctly felt. I pressed beneath my finger the accumulated fluid along the sagittal and lambdoidal sutures; but could detect no separation in the coronal suture, though I think there is a slight separation.

I then passed my finger firmly along the petrous portion of the temporal bone. This instantly caused violent sneezing, and I had to desist, as I was told that if I continued it, she would be thrown into "fits," sneezing being the premonitory symptom. I have since then, and can at any time, by the pressure above described, produce the sneezing which invariably terminates in convulsions.

Miss O——, ætat 31, has dark hair, large blue eyes, and high malar bones. She is five feet six inches in height, her head large, the walls unsymmetrical. Her forehead rises perpendicularly; the parietal bones bulge to the sides. The head may be described as long, broad, and deep, flattened upon the top—of a strumous cachexia.

The following is her mother's account of her.—Betty was a very plump, fat child until sixteen; although in her childhood, she often complained of her head's "hurting" her, and was hardly ever free from what they supposed to be nervous headache, sometimes accompanied with vomiting. There was no sign of her menstrual flux until she was in her nineteenth year, although she complained of some pain in the head, back and loins, at regular periods, after her sixteenth year, and had been given domestic emmenagogues from that time. In her nineteenth year, her trouble still gradually increasing, a physician was called in. He succeeded in establishing a slight show accompanied with dysmenorrhœa.

About this time, the "medical faculty," it seems, turned seriously their attention to her, and tossed promiscuously into her stomach, every variety of pills and mixtures which load the shelves of the modern apothecary's shop; and threw up more injections in her vagina and rectum than would medicate the waters of the vast Mississippi, with no other effect than that of producing in three years, two "slight shows," accompanied with a great deal of gastric disturbance; which sympathetically, soon pervaded the functions of her whole system.

About this period, there was established a vicarious discharge *per rectum*, which still recurs once or twice a year. Her digestive apparatus has ever since been in the most enfeebled condition, resisting all remedies. And thus she "vegetated" on for a few years, until she was suspected of "spinal disease;" and then a perfect avalanche of remedies was showered down upon her, seconded by all the known means of counter-irritation, rubefacients, epispastics, sinapisms, issues, moxas, setons, actual cautery, etc., with no relief; but a further prostration of the whole system. Thus things progressed, until about four years ago, when it was supposed she labored under inflammation of the brain; and again she waded through the whole retinue of remedial agents, recommended for this disease by various authors.

In shaving her head for this purpose, her mother first discovered an absence of bone of the size of a dime, corresponding to the anterior fontanelle. The physician's attention being called to it, he discovered it to be as stated. Shortly afterwards, a consultation took place, and she was put under the effect of "strong medicine."—I give her words.

Epilepsy soon supervened, and it was observable that an effusion had taken place, which increasing the pressure, as the fluid augmented, it became so great as to cause a separation of the bones, the violence of the convulsion increasing.

The old lady informed me she had lost two brothers, one from paralysis, the other from apoplexy. I then took my leave, having first received the assurance of the family that I should be sent for whenever she had another of her "spells." I suggested that it would not, in all probability, be long before she had one, seeing she appeared agitated about her mother. I was more readily induced to believe so, as I noticed at the time of leaving, some slight spasmodic twitches of the anguli oris, and alaquæ nasi muscles. Nor did I err in my opinion. At seven, p. m., I was sent for. I found her in a sneezing fit. She sneezed, after my arrival, 144 times in a minute, by the watch. After sneezing in this way, some two hundred times, she went into the most powerful convulsions I ever saw. Her neck was twisted round to one side, and forcibly drawn down upon her sternum; her hands flexed upon the wrist, forearm upon the arm, and drawn across the chest. The sterno-cleido mastoids were so powerfully put upon the stretch, that it seemed they must inevitably snap asunder. Her face was flushed, but not bluish, pulse not discernible at the wrist, whole countenance distorted, eyes fixed and staring, tongue protruded between the teeth (nearly all of which have been ground out during former attacks), and mouth filled with white foam. In the lapse of some ten minutes, a slight relaxation ensued, lasting for a moment or so, whereupon the pectoral muscles commenced powerfully to contract, alternately from side to side, with great rapidity, which had the effect of jerking her to and fro, with such velocity, that the friction of her dress against the bed clothes made a grating noise distinctly to be heard in the adjoining room. Whilst her breathing (some two hundred in the minute) resembled the puffing of a steam-engine. At the same time, her mouth would be drawn along with equal rapidity, and as it passed from side to side, she would snap and bite like a rabid animal. In this state, her strength equals that of three women. After about ten minutes of such paroxysms, she sunk exhausted into profound coma, her face turgid, breathing stertorous, but rather faster than usual, pupils greatly dilated, retina perfectly insensible to light, slight subsultus tendinum of the muscles of the face, twitches of the zygomaticus minor, which caused the bystanders to remark, "See, she smiles." All was quiet for a few minutes, when she suddenly sprang up, crying, or rather shrieking, "Drink, drink, drink!" After a few ineffectual efforts, and some spasmodic contractions of the muscles of the throat, she lapped or gulped the water down. In an instant the sneezing returned, and she went again into convulsions. Coma soon supervened. After having remained in this state about an hour and a half, she looked up with a pleasant smile on her face, and in a naivé manner said, "I've been in the trance." No one said a word, and she went on to talk of religion very rationally and feelingly. She also sang very sweetly a

touching hymn, and then relapsed into a stupid state bordering on coma. Next day she recollected nothing that had passed.

Just after one of her attacks, she is more sensible than at any other time. There are certain letters of the alphabet which she will not use, e. g.: p, k, etc. Her taste is perverted. She is very fond of castor oil, uses it with avidity, and calls it honey.

So much for my first visit. On Wednesday, 8, p. m., I was again sent for. I found her, as before, sneezing, which she continued to do until she was forced to stop for want of breath. She then passed into spasms. Her head was thrown back until it nearly touched her heels, simulating the opisthotonos of tetanus, her mouth thrown wide open, her abdominal muscles pressed in against the viscera, the intestines crowded against the vertebræ, extremities extended, eyes sunk deep into her head and watery, respiration hurried and weak, pulse slow and feeble. After this passed, she commenced sneezing, and then had a second spasm, most resembling the first.

It will be perceived that in this last spasm, the extensor muscles seemed to carry the day,—but that is the case generally with the flexors.

I have since seen her in many of these "sprees," but as yet have seen no two alike. At one time they simulate one species of spasmodic disease, and then another.

For a month after her fright about her mother, she had one or two "spells" every day, since which time, she has had only panting spells, lying hours together gasping for breath.

About this time, I first noticed a puffiness, and a feeling of fluctuation in the temporal region. I first imagined it to be produced either by anastomosis or the rupture of some of the vessels of the scalp, but am now inclined to think it an extravasation of the fluid in this region. The effusion becoming more diffused by extravasation, and thereby lessening the pressure upon a given point, we have the phenomena in a more modified form.

Being called upon by the family of Miss O—— for my opinion, I gave it, that tapping and drawing off the fluid held out the only prospect of relief, and in that I am by no means confident. I gave this opinion, after having bestowed upon the case all the reflection I was capable of giving it. I have always held it to be in accordance with sound surgery, never to resort to the knife so long as any other remedial agent gives promise of success.

But I must confess (after witnessing the various phenomena displayed during her "spells," and after making myself as familiar with her past history as it was possible to do under the existing circumstances), it is my honest conviction, that nothing promises relief but the operation, followed by a judicious antiplastic or alterative course, with care and discrimination.

After making them fully aware of the danger attending the operation, stating to them the *pros* and the *cons*, they first decided that I might operate, but have since abandoned the idea. Nor am I sure they will permit me, or any one else, to perform the operation. Had I operated, I should have borne in mind the risk of injuring the longitudinal sinus—at the same time applying such pressure as would compensate for the absence or loss of the fluid.

And now for the reasons by which I have been led to the above opin-

ion. In the first place, I regard the "trouble" in the head as hereditary, from the fact of her having lost one uncle on the maternal side by apoplexy, and another from paralysis, not losing sight of her mother's being threatened with hemiplegia. Now, what is the most common ascertained cause of paralysis and apoplexy? Are they not due to extravasation of blood, or lymph, or to some organic changes in the cranium producing compression of the brain? Does not the perverted taste, the sneezing, go to prove that the irritation is seated in the origin of the nerves; and thence by a known law of the nervous system, it is communicated to the extremities of these nerves; in the one case irritating the schneiderian membrane, thereby producing the phenomena of sneezing, and in the other, the perverted taste. Thus *I am led to believe* the uterine derangement to be the *effect*, not the *cause* of the derangement of the cerebral functions. It is, I am aware, a nice thing in such cases, to distinguish between "cause and effect."

I account for the enfeebled functions of the digestive apparatus on the ground that by the compression at the origin of the pneumo-gastric nerve, the stomach and diaphragm are deprived of their natural nervous stimulus. The same will hold good in regard to the urino-genital apparatus, and their nerves. The discharge *per anum*, I deem critical, proving as it does, that nature, though oppressed, still struggles to relieve herself of the fell tyrant, by a salutary process. And to my mind, it tells still another tale. That nature, though borne down with the load of imposition, has preserved yet a little of the "*vis medicatrix*," and if only assisted properly, might yet do her part nobly. Her energies, though prostrated, are not quite extinct.

When I first saw the patient, I suspected ovarian tumors, or uterine tumors, as polypus, hydatids, etc., but I have seen nothing since to justify my former impressions in regard to tumors or organic lesions of those organs. It is reasonable at least to suppose, that the cause of compression being removed, the encephalic nerves being no longer compressed at their origin, might again transmit the electric stimulus to the enfeebled organs, whose functions might in time be restored.

You will perceive, I have candidly, freely, and fairly stated my own convictions, without startling you by any new hypotheses. And after you have read this communication, should you feel disposed to venture an opinion, or make any suggestions upon so obscure and badly-recorded a case, I would esteem it an especial favor; for I am free to confess it is rather too nice a thing for me in this case to distinguish between cause and effect.

All I have stated can be well authenticated by numerous physicians who have seen her. But to the skeptic I would say, come and see and examine for yourself.

ART. VI.— *Medicinal Character of Saratoga Springs.* By M. L. NORTH, M. D., of Saratoga.

To Dr. J. A. Allen, Corresponding Secretary of the Vermont Medical Society:

Dear Sir,—In complying with your request "to lay before the Vermont Medical Society, at their approaching annual session, an account of the medicinal character of the principal springs in Saratoga; the

diseases for which these waters may most advantageously be used; their adaptation or best method of using them," etc., it is only paying a debt I have long owed to the respected faculty of that State.

I beg leave to say, in the outset, that there is not a population equal to that of Vermont, which send so many invalids to these fountains as they do. I have, many times, thought there must be some peculiar antagonism of these waters to the morbific effects of that climate. And may I not say to you, dear sir, and to your professional brethren in that State, that it is a matter of high ambition in me, faithfully to discharge the responsibility they kindly impose, by consigning to me so many of their valued patients. And can I be mistaken in supposing that, when, by my own humble exertions, aided by the powerful influence of these medicinal waters, the patients return in amended and recovering health, that the physicians themselves are most particularly gratified by the happy result of their own prescribed course?

The first subject proposed in your letter is: "*The Medicinal Character of the Waters.*" There are two modes of ascertaining the medicinal character of any therapeutical agent; first, chemical analysis; and second, clinical observation. In considering the first of these modes, namely, the investigations of the chemical qualities of an agent, I copy here the third edition of my Invalid's Guide, the analysis which I obtained in the spring of 1842, from Dr. James R. Chilton, of New York.

One gallon, or 231 cubic inches, contains:

Chloride of sodium,	grs. 363·829
Carbonate of soda,	7·200
Carbonate of lime,	86·143
Carbonate of magnesia,	78·621
Carbonate of iron,	·841
Sulphate of soda,	·651
Iodide of sodium and bromide of potassium,	5·920
Silica,	·472
Alumina,	·321
	Grs. 543·498

Carbonic acid,	284·65
Atmospheric air,	5·41
Cubic inches,	290·05

I will not trifle with the time of the intelligent members of the Vermont Medical Society by stopping to consider the individual articles of this complicated medicine. Although compounded in a region far removed from our observation, it so happens that every article of the twelve, except silica and atmospheric air, have been used in our materia medica, and most of them have long been familiar articles, yet, there is not a member of that body, who would not perceive from first sight, that the congress water has the following medicinal or therapeutic qualities, viz.: first, laxative or aperient; second, diuretic; third, antacid; fourth, deobstruent; fifth, alterative; and sixth, tonic.

Every one of these qualities is deducible from the analysis; but long before chemistry was applied to these waters, common observation had abundantly established these very identical properties. It is hence very manifest that there is a most striking coincidence between the

two modes of ascertaining the medicinal character of these waters. There are, however, two or three properties of these waters which would never have been discovered by *à priori* reasoning.

First. *The augmented effect of the combination*, contrasted with the individual effects of the respective articles. There is, probably, not a member of the convention who has not been surprised at the augmented effect of some of his extempore prescriptions. This effect of combination was fully illustrated and placed on its right basis by Paris in his Pharmacologia, and has been fully considered by subsequent writers on the materia medica. Who would dream, by examining the contents of three or four tumblers of congress water, that they would prove an efficient and immediate cathartic? The principal laxative articles, if not the only ones, contained in one quart, the usual morning potation, are ninety-one grains of table salt, muriate of soda, and twenty grains of carbonate of magnesia. And yet there is scarcely one failure of a cathartic operation in twenty trials, of taking a quart before breakfast. But who would have inferred it *à priori?*

Besides the effect of combination just considered, I acknowledge that I have been much influenced in reasoning on the *modus operandi* of the congress water, by the experiments of Dr. Beaumont on the stomach of St. Martins. It was there established that if animal broth, veal soup for example, were introduced into his stomach, the gelatin, fibrin, etc., were deposited on the coats of the stomach, while the watery parts were absorbed by the mucous membrane of this viscus before reaching the duodenum. Alcohol, wine, saline solutions and similar substances were absorbed directly from the cavity of the stomach. It is, therefore, unquestionable that not only the magnesia, but the lime and iron which are rendered soluble by the abundance of carbonic acid ever present, nay, all the ingredients, including the carbonic acid, are carried in a few minutes to the thoracic duct, descending vena cava and heart, and floated in the serum to the brain, spinal marrow, viscera, blood vessels and the minutest vessels of the secretory systems.

But, take another view of this same thing. Suppose a quart of the congress water should be carefully evaporated. By looking over the analysis, you see that the various salts that would be left from the evaporation would amount to about three teaspoonfuls, moderately heaped. Suppose these were mixed with molasses and taken before breakfast instead of one quart of the water. Ninety-one grains of table salt are less than many of us take with our breakfast. The twenty grains of magnesia would not be expected to operate, though combined with the salt, if taken in syrup. Combined with these there is a large proportion of carbonate of lime or chalk, and some iron and soda, none of which should we expect to *aid* in the laxative effect. It seems scarcely admissible, therefore, to adopt any other theory of the thorough cathartic operation of these waters than that they pass in the serum, through the general circulation to the colon, and there produce this specific, watery secretion.

At sulphur fountains, invalids have none but solid or semi-solid dejections. It is not possible to have watery stools, however large the quantity of sulphurous waters taken. At our Saratoga springs, the whole cathartic effect is on the colon; and the dejections are without exception, as far as my knowledge extends, of a watery character. The sulphurous elements of the sulphur springs probably

enter the blood: but their place of elimination is mainly in the small intestines, producing solid and consistent stools, while the outlet of the saline springs is, as above shown, the colon and rectum. But I must not tax your patience longer on the augmented, cathartic effects of congress water, and will proceed to consider a second quality that would not be expected *à priori*, and that is, *their tonic effect*. Although there is less than one grain of carbonate of iron in a gallon, its free admission to the blood and inner coat of the branches of the blood-vessels, has been supposed to render it more efficient as a tonic than fiftyfold the amount thrown into, and passing through, the alimentary canal. Beside the iron, there is scarcely an article in the congress water, excepting carbonic acid, and possibly carbonate of lime, that can produce the heating and inflammatory movements caused by that fluid. That it is the iron, is rendered still more probable from the fact that the pavilion water, which contains about four times as much iron, and the Putnam fountain, which contains more than seven times as much iron, while their other ingredients are very similar to those of the congress spring, are greatly more injurious in all inflammatory complaints. I will not, however, stay to theorize on the tonic qualities of these waters. Any one who will read the authentic reports of the various mineral springs in Europe and America will be convinced that all, except the simple saline and cathartic springs, are tonic and stimulating. Even your own Clarendon spring, which contains only 8·75 grains of solid matter to the gallon, and no iron, is allowed on all hands to aggravate inflammatory diseases. Is it not, therefore, most certain, that the perfect solution of these otherwise insoluble articles, contained in congress water, and their introduction into the minute vessels of the sanguiferous and secerning systems, is the cause of their augmented operation?

There is one more effect of these mineral waters which is out of all proportion to the sum of their individual forces, and which would not be inferred *à priori*, and that is: thirdly, *their alterative effect*.

To you, sir, who have spent several weeks here this season with such signal blessing, it is probably not unknown that many leave here after spending two to four weeks, using the waters without the least apparent amendment, nay, with great irritation and discomfort, who, soon after reaching home commence convalescence and continue it till an entire cure is effected. If all the visitants to these springs were called upon to express an opinion of the efficacy of these waters six weeks after reaching home it would be much more favorable than on leaving here. There is a spring in Germany to which patients resort with the express understanding that they are to grow worse and worse for four weeks, by means of the perturbations of the waters, when they leave for home, experiencing their convalescence after leaving the spring.

It is true, that a great majority of those who are benefited by the Saratoga waters, convalesce here in some measure. But, the crowning excellence of these waters is the abiding hold the invalids obtain on the amendment they receive here and at home.

Hydropathy is just now making itself famous among us, and your own Brattleborough was said last week to have one hundred and seven patients. I most unfeignedly bid the process welcome among the specialities of the age, even at the risk of being "read out" of the good family whose respect I most ardently desire. Operose and forbidding

in the extreme as is the everlasting round of wet sheets, wet bandages, douches, hip baths, immersions, etc., etc.; the acquisition of health to a poor, groaning invalid, is worth the whole six months' course and the liberal compensation besides. These daring innovations on the too tender and delicate habits of our females, who have been withdrawn from the sun, and rain, and winds, confined in rooms of 70° or 80° temperature, enveloped in flannels, furs and rubbers, shuddering through fear of a cold of a week's duration, deserve, and shall have, my meed of praise. They are doing great good. I have long desired to see my fellow-beings emancipated from their false fears and notions of common colds. I calculate that every disciple who has braved the splashings of the water-cure will never again be in bondage to the common notions of bundling up. Excusing their stomachs, too, from hot slops, hot soups, hot food, etc., will do them no evil.

I rejoice that my own brethren have opened their eyes. They have sent me several invalids this season, who have, under their directions, gone into a tolerably full employment of the cold water remedies. We ought not to forget, that, except the cold diet, the remedy is our own. "It is our thunder!" Those members of the convention who have decided to be *eclectic*, and to cull what is valuable from *all* the specialities, will allow me to state, that Dr. Edward Johnson, a regular physician of London, has published "The Results of Hydropathy," describing at length nineteen cases of his treatment, in which he has fairly adopted the valuable part of the process, rejecting the humbuggery that was originally connected with it, and at the same time combining calomel, quinine, the lancet, etc. Publishers, Wiley & Putnam, N. Y., p. 181, 12mo. Our faculty should take this matter into their own hands, for, with a little energy, it can be practised in their daily ride, and they should continue to employ select parts of the treatment long after the public shall have grown weary of the formidable undertaking of residing six months in one of these self-denying and pains-taking establishments.

But I return to the inquiry: what is there in the Saratoga waters that would warrant the expectation or certainty that a permanent amendment would so signally follow from a course of a few weeks' potation and bathing? By recurring to the list of articles, there are only two medicines with which we are not perfectly familiar, and to these I shall limit my remarks. These are the *iodide of sodium* and *bromide of potassium*. If ever there was a medicine that came into the materia medica through the right door, in that noiseless, unostentatious, but steadily-progressing manner which gives strong promise of permanent favor and employment, it is the hydriodate of potassa. I forbear to *expatiate* on its widely-extended applicability and usefulness. But what unexpected results have occurred from its use? How many cases of asthma, that real opprobrium of the profession, have been relieved or cured? Dr. Mutter's case of lupus, on the nose of an asthmatic patient, calling for use of iodide of potassium: what untold relief has it accidently wrought among the ranks of asthmatics? Many are "as good as cured." Yet there is no rational *modus operandi* announced by the faculty. This article, in its serpentine, sinuous adaptation to the removal of multiform, chronic ailments, hitherto supposed to be perfectly dissimilar, seems to have confounded and pronounced baseless the venerable classification of medicines. Classification! It

is a conventionality. It is an artificial bond, formed for convenience. Look at sulphate of zinc and tartrate of antimony. The one entonic, stimulating, building up, even when it vomits, the other, a deadly, depressing agent. Yet, both emetics. Look at iodine, grown in plants that were matured in a living fluid, a fluid that would kill all the vegetables on which we have heretofore experimented, and its nature is as unique as its origin. Who can classify iodine and its compounds? Quinine, what is that like? Does the word *tonic* tell at all its qualities?

But to return to the hydriodate of potassa. I have known a patient at the commencement of a frightful paroxysm of asthma in the night, take thirty grains of this medicine, and in forty minutes be asleep for the night. In the morning he could give no account of it. There was no increased action of bowels, kidneys, blood-vessels, nor any known change of action, except looseness of mucus in the lungs. If he has to repeat these large doses a few nights, he finds a bitter taste in his mouth, showing that the blood is fully impregnated with the article. There may be also slight swelling of the gums, soreness of the teeth, and possibly eruption on the face. These are *all* the evils; the alleged consequences of injury to the absorbent system, never having in my opinion, resulted from the hydriodate, whatever may be said of the iodine itself. Having taken it three and a half years in my own person, as incomparably the best palliative for asthma in doses of all grades, from infinitesimal up to ℥ ij. at once!! and received careful statements from other physicians who have watched its effects, I cannot believe in its injuring the tissues. It is truly an alterative in asthma—that is, "a remedial agent, that restores health to the system, in a gradual, imperceptible manner, without any marked sensations or uncommon evacuations during their operation." In this way it restores health in the multiplied phases of scrofula, and, in brief, in all the diseases resulting from generally-vitiated constitution or abnormal, cachectic action.

Such, Mr. Secretary, was the nature of your own threatening complaint, when driven away from your wide field, this season, to Saratoga. It was a genuine *cachexy*, introducing into several tissues, including the brain, a wild, anomalous, ataxic movement, which, unchecked by some energetic alterations, would have soon subverted the entire fabric and wound up in death. Have you not thought, sir, that the energetic agents of this happy result, were the iodide and bromide of congress water?

Clinical experiments, carefully conducted by such men as Magendie, Barther, Brame and others, in Paris, and Drs. Williams and A. T. Thompson, of Great Britain, have established a great similarity in the strength and effect of these two articles. The bromide of potassium is recommended by the faculty of Dublin, as a substitute for the iodide of potassium, because of its costing less than half the price of the iodide, and at the same time, equally useful. Future observations may show the different grades of action resulting from the combinations of these four articles, bromine and iodine with the two alkalies. But the observations thus far made, render it safe to assume that almost six grains of the two salts which are found in every gallon of congress water, should receive a most searching consideration and exact appreciation, in estimating the augmented curative effects of the Saratoga waters.

My own position precludes my experimenting on any other combination than what nature affords me in the nine fountains of this valley. But it would be a very useful and promising work for some of the members of the Convention, to dissolve three grains of either iodide with three grains of a bromide in one gallon of water, bottle, and give three half pints each morning for four weeks as an alterative. I should be very much obliged for results, either way, addressed to me by mail, or appearing in the columns of the New York Journal. Until further light, let the suggestion hereby made, of the augmented alterative qualities of the Saratoga waters being caused by the presence of those new salts, be kept in mind by the members of the Convention and the profession generally, till a full adjudication is rendered.

In concluding my remarks "on the medicinal character" of our waters here, let me say: that the reason I have confined my remarks to the Congress spring is, that it is more cathartic, is less stimulating and tonic, and is indeed, *the* fountain of the village. The composition of the others is so similar, except the far greater amount of iron, that they scarcely need to be particularized. I should say of the iodine spring, that those physicians abroad who send scrofulous patients to that spring, attracted by the name, should be informed that the name was adopted *ad captandum;* that it has as little iodine as any spring, and having as little iron as any, except the Congress, it is often the poorest spring to which a scrofulous patient can resort.*

The two remaining topics of your inquiry can be despatched with more brevity. One of them is, "*The diseases for which these waters may most advantageously be given,*" and the other, "*Their adaptation; or best method of using them.*" On the subject of the best method of taking the waters, it would be wrong, in this place, to make extended remarks. The guide-books for invalids, which are purchased at a low price at Saratoga, give very full directions. Almost the only method in use here nine summers ago was, to take four to six tumblers in the morning of Congress spring water, and one or two tumblers at eleven and five, of some of the tonic waters. This substantially is the present method, only that less Congress water is necessary, since it has been newly curbed. If a patient comes here with inflammatory complaints, it is my practice to direct him to confine all his potations through the day to the Congress spring, on account of the more bracing effects of the other springs.

There is another method, called the *alterative plan*, which is gaining favour. It consists in taking, say, a large half pint of water four times a day. Physicians of intelligence, who have spent several seasons here, have generally adopted this plan. Instead of seeking to hurry the ingredients through the system and ensuring their speedy expulsion, the object is to keep each dose as long as possible floating in the circulating fluids, working a gradual, imperceptible change in the blood, muscles, brain, nervous system, secretory organs, &c. I nevertheless, prefer the cathartic course in a great majority of cases.

* Since writing thus far, Professor Emmons, of Albany, has analyzed a new spring in the north part of this village, which he says contains twelve grains of hydriodate to the gallon. If this be correct, the fountain is destined to absorb a marked consideration from the medical faculty. The analysis was made in Albany, but I am told Prof. E. will repeat the process here soon, the results of which will most certainly be communicated to the public. If permitted, I pledge myself to forward it to the readers of your journal.

If the diathesis of the applicant be entonic, it is necessary to counteract the bracing effects of the waters, by the simultaneous use of salts, wine of antimony, blue pill, calomel, or the lancet. On the contrary, when the pulse is feeble, skin cool, and all the movements languid, I send them at once to the Pavilion spring, a most thoroughly exhilarating and tonic remedy, directing them to drink it all day, to the amount of eight or ten tumblers each day. With this are sometimes combined London porter, sulphate of zinc and spices, animal food, acrid condiments, &c. There are many invalids possessed of morbid sensibility of the membranes. It is often necessary in their cases to combine soothing remedies to protect them from the irritating effects of the waters. Hyosciamus, carb. ammoniæ and camphor, are a favorite combination of mine. A lady has this moment left my office, whose nervous sensations, while drinking the water daily, were most horrible, casting a gloom over every thing, and rendering life undesirable, till I prescribed some five days ago, the following as a shield for her irritated nerves: ℞. Tinct. Sanguinariæ, aqua ammoniæ, āā. ℥ ss. M. Dose, thirty drops, three times a day in ginger-tea. She calls to say she is perfectly freed from the whole difficulty, and is drinking with great comfort and hope.

We now come to the remaining subject, which is, "*The diseases which are most benefited by Saratoga waters:*—

The following list, which, though I have been observing nine seasons, I bring forward with diffidence, comprises that class of invalids who require the cathartic course of treatment. Dyspepsia in all its forms; constipation; chronic diarrhœa; hæmorrhoids; jaundice; biliary calculi; palsy, without inflammation of the brain; hysteria; hypochondriasis; neuralgia, whether seated in the face, stomach, liver, uterus, or extremities; chronic catarrh; humid asthma; nervous palpitations; enlargement of the liver and spleen; incontinence of urine; gravel; leucorrhœa; irritable uterus; cutaneous eruptions; rheumatism; rheumatic enlargement and stiffness of the joints; diabetes; prostrate and stationary condition after acute diseases; dropsies; vertigo; periodical headache; spinal irritation; stricture of the rectum.

I subjoin a list also of those diseases which, in my opinion, require an alterative course. Scrofula; scrofulous tumors and ulcers; rickets; goitre; many cases of neuralgia; chlorosis; amenorrhœa; enlarged tonsils; long-continued indigestion; tabes mesenterica; sterility; secondary syphilis; abuse of mercurial medicines; obstinate intermittents; ministers' throat-ail; black jaundice; anæmia; neuralgic heat of stomach; general exfoliation of the bones, with ulceration.

Here, perhaps, I ought to stop, as I have already embraced all the topics of your letter. But I cannot doubt you designed to embrace in the investigation all the important remedies peculiar to the plan. I therefore, venture to add a few remarks *on the external application of the waters*, or *BATHS*. All of you who have been here, have noticed one thing, that every body bathes. Whether the invalids consult the physicians or not, they all expect to bathe. Why is this? Do these invalids bathe at home? Do your chronic patients expect you will make them take a warm bath three or four times a week? Although the bath is more used in cities than formerly, except at watering places it can scarcely be called a popular remedy. I ask, then, why

have baths been a universal adjunct here for many years? My answer is, that the same beneficial consequences which have followed the drinking of the waters, have followed the external application. The same joyful sensations of convalescence, which have demanded houses to accommodate the throng, have called for the construction of four large bathing establishments, and given them employment.

Suppose you should saturate simple water with carbonic acid, and heat it to 100° Fahrenheit. There would still be a great portion of the gas left. Suppose you keep a patient immersed in this thirty minutes. You know the stimulating effect of this gas on your fauces, palate, etc. If a whole bath could be supersaturated with the same gas, both free and fixed, accompanied by a large quantity of table salt and other salts, as is actually the case, its free application to the skin, even though a portion of the gas may be dissipated by the heat of 100°, will inevitably produce stimulation, redness and prolonged warmth and glow. There are simple carbonic acid baths in Marienbad, Germany, formed by collecting the gas as it emanates from the ground, and these *air baths* are invariably warming and stimulating.*

Great numbers here have volunteered to tell me of the difference between the permanent exhilaration, glow and warmth of one of our acid-saline baths, whether cold shower, or warm immersion baths, and the same baths from fresh water. These baths are, truly, a most powerful auxiliary to the internal use of the waters. I have not a doubt, that a bath composed wholly of the water of the Pavilion or Putnam springs is the best bath in the United States. The sea-baths are next to them. But they leave the skin so cold and clammy, there is so little glow or reaction after them, that they prove rather depressing to patients with feeble movements and circulation. Baths at the Sulphur Springs of our country are good; but when heated to 100°, the sulphuretted hydrogen has mostly escaped, and there is little left to stimulate the skin, compared with our table salt, iodine and bromine. Lugol's iodine baths are scarcely more strongly impregnated with iodine and bromine than ours. Of sulphur fume-baths I think very highly; they are, however, difficult to administer, and expensive. Medicated steam-baths have frequently attempted to live by the side of Saratoga baths, but invariably have failed. As to common fresh water warm baths, I think their benefits extremely equivocal. They need some addition, to make a medicinal effect on the cutaneous surface, such as common salt, or sulphuret of potash.

Having said thus much about the comparative efficiency of different kinds of baths, allow me, before I conclude, a word on the subject of *temperature*. The Convention will readily concur with me in the opinion, that in routine practice of the faculty, hot baths are often resorted to as a proof, in extreme cases, of professional assiduity and thoroughness in using all proper remedies, without any fixed rationale of relief. Ask two or three physicians in consultation, what shall be the temperature of a proposed bath, and they would be troubled to find their reasons for any precise temperature. But is there no rational principle to direct them in the decision; and no fixed basis of reasoning?

To attempt the establishment of such a basis, suppose you were to find a man sunk down in the snow, after long exposure to cold, taking

* See Medico-Chir. Rev., 27. 434.

his last sleep had you not prevented. You would find his pulse very feeble, and beating about forty strokes a minute. The physicians of Petersburgh, Russia, are called every winter to scores of coach-drivers, who spend the evening in the open air, whose pulses are in the same state. Many die there every season, not suspecting their danger, and too torpid to be conscious of much suffering. This fact of itself is fully sufficient to decide, that cold is a depressing agent, a sedative, an antiphlogistic remedy. It is confirmed by counting one's own and others' pulses, as I have done, while the patient is in a bath at 75° or 80° temperature. Conversely, a bath at 110°, uniformly quickens the circulation, stimulates the skin, and increases heat and action for hours. If the members will apply these two or three simple considerations to their own practice, they will find they have very nearly conformed their treatment to these fundamental and rational principles. If you were called to-day to a patient, with a stone passing the gall duct or ureter, you would immediately order a kettle of hot water, among other means, and apply cloths as hot as could possibly be borne, and with safety and infallible benefit. Why? Because you find a slow, soft, atonic pulse in all such cases, and the soothing fomentation can be borne. So of spasmodic pains in the alimentary, urinary, and other tubes. So in all the neuralgias.

But, suppose you apply these hot fomentations to the abdomen in enteritis. You have increased the danger certainly; very probably the pain. In this case, you have a small, wiry, incompressible pulse, denoting inflammation of an entonic character, and your hot applications have increased the inflammation and danger. Who would apply hot fomentations to phrenitis or pneumonitis? Who would hesitate to apply constantly ice-water, or cold well-water? Rheumatism of entonic character, that is, with hard pulse, is uniformly benefited by cold water, applied by cold affusion, cold immersion, cold shower, cold sponging. But if the pulse be soft, no matter how hot, or fat, or florid the patient, I pledge myself you would not dare cold affusion, but would resort to hot fomentations and hot baths. In this way you proceed consistently, and scientifically, and usefully. In my "Guide to Invalids," I have laid down this most simple principle as a criterion for the temperature of baths, from which I have seen no cause in eight years to depart.

"If the pulse is hard, demanding calomel, Epsom salts, antimonials, or bleeding, whatever be the colour or heat of the skin, or name of the disease, or the muscular strength, I prescribe a bath from 65° to 85°, or cold shower, and have thus far had no reason for regret or mortification. On the contrary, if the pulse is soft and slow, indicating that bleeding would be injurious, I have without hesitation prescribed the hot bath from 100° to 110°, without any untoward result, although great languor may have been experienced in the baths. If the patient has cool, perspirable skin, pale face, pale lips and tongue, the indication for the hot bath is still more clear. I invite from my medical brethren, who may be interested in the subject of baths, an unbiassed and faithful trial of the foregoing principles, for the administration of a much-abused but excellent remedy."

In conclusion, the constitutional condition of a patient changes so suddenly under the combined influence of the waters externally and internally, calling for changes in the strength of the water selected, in

the quantities taken, in the auxiliary remedies, whether tonic, reducing, or quieting; for changes also in the temperature and form of the bath used, that I may have appeared to them to have rendered more attention, in certain cases, to their patients, than they supposed to have been necessary. Patients often become discouraged, and need professional encouragement, so slow and imperceptible is the amendment. Sometimes they become saturated with the water, have loss of appetite, stricture across the chest or head, or cholera morbus. This I call the "*water-storm*," which can certainly be allayed by a rigid and literal abstinence from food thirty-six hours, a saline cathartic, and omitting the water. Instead of fleeing home and losing the expense of their journey and their prospects of recovery, they uniformly recommence the use of the waters in two days.

Accept, Mr. Secretary, for yourself, for the members of your Convention, and for the faculty in general, my grateful acknowledgments for the many unequivocal favors and kind expressions of regard bestowed upon me both here and elsewhere.

ART. VII.—*Case of Rheumatism. By* ALVAN H. TURNER, M. D., of S. Tyringham, Mass.

MRS. G., the subject of the following history is fifty-eight years old, large, accustomed to labor, well-educated, of a cheerful disposition, has generally enjoyed good health. I was called to see her on the 16th of March last. Found she had been taken unwell some two or three weeks before, for which she was induced to take "a course" of steam, lobelia, and Cayenne. After this she was somewhat relieved. At the urgent solicitation of a very kind friend, an ancient maiden lady, who was spending the winter with her in the absence of Mr. G., she submitted to a second course. The relief this time was not so marked as they expected, and a third became necessary. After that she was so sick that the Doctor must be called. The Doctor, or rather the Doctors, went and administered a fourth course. About this time it was ascertained that she had inflammatory rheumatism, and for rheumatism "a course" was a sure and sovereign remedy; so she must have one more to complete the cure. The fifth left her in a peculiar state, talking very strangely, so that some said she was delirious. However she had vomited smartly, and thrown off great quantities of yellow bile. This showed that there was more there, and of course she could not recover till it was all removed. The sixth course left her more delirious, though she had vomited full as much as the Doctors wished. And besides the rheumatism was so bad and the strength so prostrated that some of the timid ones began to talk about danger. Oh certainly! According to the Doctors, "it was a deadly case;" but they had "seen hundreds as deadly as that," and never lost one, "the leaves" had always cured them! They had no doubt—they were almost sure—another course would bring her out bright. And sure enough, with the free use of hot drops and friction, she lived through the seventh course. This was on the 16th of March.

I found Mrs. G. in a bad condition, entirely helpless, the joints of the right arm and leg stiff and lame from the attack they had recently experienced; those of the left side then in the active stage of inflamma-

tion; the bowels confined: nothing but injections had been allowed; urine voided in small quantity two or three times in twenty-four hours; thirst urgent, especially for cold water; a most perfect loathing of food; the tongue, mouth, and fauces, as far as seen, a uniform purplish red; the pulse small, rather wiry, and frequent, but intermitting from six irregularly on to twelve or even fifteen beats in the minute.

I may remark here that I had several times prescribed in the case of Mrs. G. during the last five years, for severe gastric derangement and functional fever. The attacks were always of short duration. It was her opinion to the last, that the ailment which commenced her present alarming sickness "was precisely similar" to the many she had formerly experienced, and that she should not have had her present disease if she had done nothing, or had been steamed but once or twice. I have never been prepared to admit the last of these opinions—that the rheumatism was, or indeed could be, originally excited by the treatment she received. But however this may be, I have no doubt that the vast quantities of acrids which were administered, with perhaps an injudicious use of the vapor bath, and especially the violent and repeated vomiting to which she was subjected, all acting upon a constitution strongly predisposed to inflammatory diseases and upon a heart already hypertrophied, had laid the foundation for a train of symptoms that were "deadly" indeed.

My first efforts on taking charge of the case were directed principally to allay the subacute inflammation of the mucous membrane—no very light task, as any one will testify who has tried it, after a patient has been steeped to saturation inside and out in hot drops and hotter composition tea for three weeks.

March 23. In reference to the rheumatism the best report is, that it is no worse. Other symptoms much improved. Gave vin. colchici sem. in drachm doses.

March 24–25. No change. Continue vin. colch.

March 26. Morning. Bowels relieved without a laxative; dejections dark and fetid. Urine much increased. No relief.—Evening. Bowels have moved several times; urine copious; skin moist; has slept some; very marked subsidence of heat, tenderness, and swelling; almost entire freedom from pain; patient often saying "Oh! how easy I am!"

March 27. As above; some nausea; vin. colch. in half drachm doses.

March 28. Nausea and prostration distressing; omit colch. Only slight stiffness of some of the joints.

April 1. Extreme difficulty of breathing.

April 2. The same. Unable to lie down.

April 3. Dyspnœa subsiding.

April 4. To-day the articular affection returned. Dyspnœa gone.

The colchicum as before conquered on the third day, and there has been no return. After two days' rest to the patient the breathing became oppressed, and during the whole of April it could hardly be said to be free, paroxysms of extreme severity occurring every few days, and in the intervals being such as entirely to forbid active exercise.

During the month of May there was a considerable improvement, the patient feeling able (if she had been allowed) to walk about, and indeed she did, a few times, ride a short distance. Many of the friends even promised themselves and her, that she would recover. But they

were uniformly told that there was hypertrophy with dilatation of the heart, that the hard breathing resulted from the congestion of the lungs, occasioned and kept up by regurgitation from valvular imperfection, and that the result must inevitably be death at no very distant period.

June 4. Breathing more frequent than natural; inspirations quick, almost jerking; slight pain when a full inspiration *could* be taken; countenance anxious; urine scanty; pulse quick, small, and hard; action of the heart tumultuous, intermitting ten to twelve beats in the minute. Blood drawn from the arm, in a short time showed a thick buffy coat. The relief from a small bleeding (twelve ounces) was considerable, but suspecting the existence of pericarditis, I drew as much more when the pulse softened.

June 5. Suffering less; inspirations fuller, but still oppressed. Bled to twenty-five ounces. Appearance similar to the last; relief complete.

June 6. Slight return of symptoms. Bled to sixteen ounces. Not buffed; syncope. This was the only instance in which the blood drawn by venesection or cupping did not exhibit the buffy appearance.

September 28. For many weeks past the patient has been unable to lie down more than a few minutes at long intervals. The powers of life have been gradually giving way. The paroxysms of dyspnœa have been attended with more decided palpitation, instead of the "fluttering sensation" of which she complained in the early part of her sickness, and indeed for years before. Œdema of the feet, ankles, and finally of the whole legs.

Present condition. Reposing quietly on the bed, in nearly a horizontal position. Breathing short but easy. Countenance cheerful. Some appetite. Bowels regular. Urine free but not copious. Pulse 65, intermitting three or four. Ankles and legs reduced full half in two days. Shoulders œdematous for the first time, extending on the left arm to within three inches of the elbow. Mind clear and calm, as usual, joyful in view of the expected issue—death.

During this long period of suffering, general or local bleeding produced but doubtful and at most but temporary benefit. Vomiting, whenever accidentally occasioned, brought on most intense dyspnœa. The only internal treatment that was of much avail was that which promoted diuresis without deranging the gastric functions; such as calomel, squills, and digitalis, or the two latter with the carbonate or acetate of potash, etc. The comfort of the patient was in proportion to the diuresis. A few weeks since a physician, who once lived a few years in this town, and who had given the strongest assurances that he could cure the patient if he could see her, was called, and without my knowledge left a preparation of colchicum. But it utterly failed, to say the best of it, of doing any good, a result which I was prepared to expect, as it had uniformly done so in my hands, except in the two instances already noticed, owing I suppose to the derangement of stomach which it always occasioned. In this instance the derangement, showing itself by nausea, furred tongue, and loathing of food, was particularly obstinate and severe, and only yielded on the accession of the present symptoms.

October 1. Mrs. G. had a good night; got up feeling better than for a long time. While she was eating her breakfast the family left the room to eat theirs, and on their return found her nearly insensible,

and she immediately became entirely so. I saw her in about two hours. She had remained unconscious half an hour. Cannot articulate; left side paralytic and insensible; pulse 45; counted again in ten minutes, 72; in ten minutes more less rapid but exceedingly irregular, etc. No *apparent* cause for the variation. She eventually recovered very imperfectly the power of speech, and the use of the arm and leg; but sensation never returned to any considerable extent. Both the lower extremities were cold—the left obstinately so, and soft gangrenous spots soon made their appearance, and spread over the whole foot and ankle. The mind, which had been of the highest order, was gone, or only partially recalled at intervals.

She died November 9th.

I did not get permission to examine the body till a short time before the funeral, on the morning of the 12th, so that we only had time for a hurried inspection of the heart alone. Dr. Bidwell, who had seen the patient several times with me, assisted by Dr. Walton, performed the examination, and kindly prepared the following report:

"Autopsy.

"*Ribs* of both sides rather prominent.

"Several ounces of serum, tinged with blood, in the cavities of the pleura, and also of the pericardium.

"The *right lung* was almost wholly indurated, pale, sunk in water; the left completely engorged with blood, very dark, the superior lobe crepitant; lower lobe not crepitant, sunk in water.

The *whole heart* was enlarged nearly one half, and all its cavities were completely filled with coagulated blood, except the right ventricle, which contained, besides some coagula, several ounces of a yellow, fat-like substance—unorganized polypi—probably formed in the last hours of life. (See below.) The vessels of the heart itself were very much increased in size and turgid with blood.

"The *right ventricle* was greatly dilated, and its walls thickened; the *left* exceedingly hypertrophied, without dilatation; its walls being nearly an inch thick. The muscular substance of both ventricles was pale and easily lacerable. (Was not this a post obit change?) The *left auricle* was enormously dilated. While distended with coagula, it was almost as large as all the rest of the organ. The muscle was increased also, and was firmer and darker than that of the ventricles.

"The *aortic valves* had some small vegetations near their apices; apparently not enough to impede their regular action.

"The *mitral valve* was converted into a thick cartilaginous ring, with a spicula of bone on one side, almost denuded. The orifice was of an irregular semi-lunar shape, and contracted to half its normal size, and would admit easily only a single finger. It must have been, to a degree, permanently patent.

"The *aorta* was much dilated, but without change in the arterial coats.

"Head and abdominal viscera not examined, for want of time.

"E. C. Bidwell,
"L. C. Walton."

I subjoin the following communication, not so much from its concurrence with my views, or its reference to the case in hand, as from the intrinsic value of the principle brought out—that not the increase, but

relief, of dyspnœa, *may* betoken the formation of polypus. Should not the distinction hinted at receive consideration; that is, if the obstruction occur *before* the pulmonary supply, the dyspnœa will be lessened, and if after—in the left heart—it will be increased? May not the brain-affection in the above case, which occurred within four days from the change noted September 28, and which I suppose was the effect of non-purified blood circulating in the organ, help to strengthen the hint?

"Dr. Turner,—Sir,

"As you object to my view of the formation of polypi in Mrs. G.'s case, you may omit the hypothetical clause expressing it. As to your view of that event, designating as its period the week preceding the attack of paralysis, I find nothing in such authorities as I am able to refer to, that sustains it, inasmuch as all unite in assigning to polypus, as one of its prominent symptoms, either a sudden accession, or great aggravation of dyspnœa. Nevertheless, your view is rendered plausible by several considerations; one of which is, that the symptoms, aside from dyspnœa, which polypus might be supposed to produce, were present; such as coldness of the extremities, (if not of the whole body), the supervention of cellular dropsy in the upper half of the body, stagnation of blood in the capillaries of certain parts, etc., evidences all of a new obstruction to the return of the venous blood.

"Another consideration is that the patient was in the state most favorable for the occurrence of polypous concretions; that is, she was greatly reduced and the circulation depressed, by a harassing disease, already of several months' continuance, and not less, perhaps, by the nausea which, whether intentionally or not, was the result of Dr. ——'s prescription, and was continued all the while she took his medicine, and long afterwards.

"Finally, notwithstanding all that authors may say to the contrary, it seems to me not unreasonable that polypi should sometimes *relieve* dyspnœa, instead of causing it. In the case now under consideration, the dyspnœa was unquestionably produced by the excess of blood in the lungs, thrown back upon them by the obstruction beyond; in other words, by the disease of the *left* heart. Is it reasonable to suppose that an obstruction to the flow of blood *into* an organ laboring from an over-load of that fluid, should *increase* the burthen or the labor? Would it not be more rational to expect, that the hindrance to the *in*gress, would tend to counterbalance the pre-existing hindrance to the *e*gress, and so rather relieve than aggravate the consequences of the latter? It seems to me that we have only to apply the well-understood principles of hydraulics to this matter. Let us suppose a reservoir like that of the Croton water-works on 42d Street, New-York, engaged in receiving and distributing at the same time; if a part of the distributing pipes are shut, and in consequence the reservoir threatens to overflow, or does overflow, what is the remedy? Obviously to cut off a portion of the supply. No one would suppose for a moment that to diminish the flow of water into the vessel would increase the danger of an overflow. And how can an obstruction before the lungs (in the order of circulation), e. g., polypus in the *right* ventricle, aggravate the dyspnœa which is the result of obstruction on the other side—the left heart?

"Yours, &c.,

"Salisbury, Ct., Dec. 1846." "E. C. Bidwell.

ART. VIII.—*Thoughts upon Insanity and Hints to Medical Witnesses.* By SAMUEL HALL, M. D., New-York.

WHAT are the evidences of sanity? This question we are almost tempted to ask, in preference to the one so often asked, and never yet satisfactorily answered, of What are the evidences of insanity? And by this method we hope to be enabled to arrive at some conclusion in regard to this question, by which innocence may be saved from the horrors of a lunatic asylum, and crime meet with its just punishment. The question of what are the evidences of insanity? in a medical view, never was, or probably never will be, satisfactorily answered; for in answering it, the difficulty arises, what are we to judge by. In examining a patient for disease of the lungs, or fracture or dislocation of a bone, we have the senses to aid, and the comparison of the sound organ to assist us, but in the investigation of disease of the mind, we have mind grappling with mind, the emanation of the Deity, trying to comprehend that which it is impossible to understand; as well might the mind of man attempt to explain the formation and constituents of God himself, as to try to explain that gift from Him that man calls mind. This difficulty arises from the want of something, with which to compare the mind we desire to examine, and we must and do compare it with something; and that something is either our own mind, as far as we are acquainted with it, or the minds of our friends. This we seldom or never acknowledge to be the fact, nevertheless it is so, and the way we proceed to the examination, is to compare the patient's ideas or actions with our own or our friends if placed in the same situation.

Now, this method may be liable to many objections, for as no two faces are precisely alike, neither are two minds precisely alike, so that it might be difficult for an observer to say whether the mind of the physician or the patient was of the highest or most perfect order. And to compare the patient's acts with other persons, is liable to the same objection, for no two men act precisely alike in the same situation, nor do we ourselves know to a certainty how we would act in a similar case until we have been so placed; and the patient, though thinking and, perhaps, acting different from us, is just as likely to be right as our friends or we are.

Nor has the law been able to explain or define what is meant by insanity, in order to evade the performance of contracts, or escape the punishment of crime; for what has been acknowledged by one court or jurist to be insanity, has, in other courts or by another jurist, been pronounced to be sanity. Thus in the case of the late Miss Lispenard, of this city, whom the surrogate and the Hon. Ogden Edwards, together with the Chancellor, pronounced to be insane, and therefore, incapable of making a will or of devising her property, whom the Court of Errors, the highest legal tribunal in this country, upon an appeal, decided to be of sane mind, and competent to give, or bequeath, or devise her property. And in a case lately, in which a man by the name of Kleim, murdered a woman residing in a shanty in the outskirts of this city, the plea of insanity being set up as a defence; on a jury being empanneled to try the question of his sanity, they decided that he was of sane mind, which being contested by counsel for prisoner, a new trial was granted and the second jury decided him to be insane, which since has proved to be the fact, as he is now an idiot in the asylum.

Nor have the learned counsel and judges of England been more successful than their unrobed republican brethren of America. Thus at one time, in England, a man was considered legally liable for his acts if he was able to count as high as the number twenty, while other judges, again, made a total deprivation of reason and understanding necessary to evade punishment or avoid the fulfilment of contracts, while Lord Hale, that eminent jurist, laid it down as sufficient to render a person liable to punishment, if they knew the difference between right and wrong, or if the person knew as much as an ordinary child of fourteen years of age, rather unsatisfactory we must admit, as his lordship does not say of what country the child shall be a native, and we are satisfied that a child of fourteen in this country knows a vast deal more than a European of the same age. And Chief Justice Tracey, in the trial of Arnold in 1776, for shooting at Lord Onslow, said, that in order to escape punishment on the ground of insanity, it must be proved that the prisoner was void of *all* understanding and memory, and be no more able to judge of his acts than an infant or brute; while Chief Justice Mansfield, in the trial of Bellingham for the murder of Mr. Percival, in 1812, told the jury, that in order to acquit the prisoner, they must be satisfied that he did not know that he had committed a crime against the laws of God and nature; and later still, Lord Lyndhurst, in the case of Oxford for shooting at the queen, supported the same test of right and wrong, while we all know that there are persons who know they are doing wrong, but cannot avoid it, as in the case of persons who, occupying a high position in the world, are given to pilfering, though having no want for the articles thus purloined, but are still unable to resist the temptation, which persons really are insane. The great poet, who was so well acquainted with human nature, makes memory a test of insanity when he makes Hamlet to say:

> "Bring me to the test
> And I the matter will reword, which madness
> Would gambol from."

While again there are others who suppose it only necessary to constitute insanity if the person acts contrary to those by whom they are surrounded, or have a different notion of the proprieties of life from others that live in the same class of society, and in fact, who act or think different from what *they* do.

The time has now arrived when it is more than usually necessary for medical men to be acquainted with this subject, as upon their testimony or opinion often rests the verdict of the jury; and whether courts pay any attention to medical testimony or not, they always like to have the medical testimony in fault, if possible, should their decisions ever come to be reversed by a superior tribunal. At present it is almost impossible to convict a man of crime owing to the plea of insanity, which sometimes is the case; but the question should be how great is the amount, or character of insanity, in order to avoid the performance of a contract, or to shield the culprit from justice? And in such cases physicians should be very careful how their opinion is given, in order to prevent crafty and designing, or as they are called, *clever* lawyers, from turning their admissions into channels by which they may be made to color a statement which the physician does not believe, nor ever intended should be done by his testimony. This plea is now so often used as a

pretext, that even the dearest and most sacred ties are rent asunder, and the vile murderer walks amongst us unpunished.

But a few months ago, a young lady in a neighboring State, eloped with and married her father's gardener, and for so doing she has been pronounced insane, although two intelligent and highly respectable physicians testified to the fact of her being as sane, and would compare favorably with a majority of females; and therefore is to be torn from the arms of her husband and be returned to a home which to her is more cruel than the lunatic asylum, or else wear out her days amongst idiots and in solitude. This case was tried before a circuit judge and New York jury of free and intelligent citizens!

And only a few days since another case terminated in one of our courts, in which a young man was incarcerated in the same establishment with the above lady, for the crime of marrying a poor though beautiful and virtuous girl of an inferior rank in life.

By a late number of the London Lancet, we learn that a girl who was *enceinte*, and had, by this act, incensed her brothers, to be revenged upon them, mixed their morning meal with poison and caused the death of three or four persons; she also has been acquitted upon this plea, although up to this time, not a whisper had been heard of insanity.

And in a neighboring city, a few months since, a man murdered his mistress, and this plea saved his life! And who does not remember the case of the brother of a girl who was seduced, shooting the seducer; not but the seducer deserved his death, but the fearful spread of this insanity, as a justification for crime, is the reason of noticing the fact. Friends now have only to get two physicians, (of which many are too easily got), to swear to a commitment when any of their sons or daughters marry a person they may not happen to like; and, presto! before the unsuspecting party is aware, they are confined in a mad-house and committed to the care of mocking strangers, or turned over to the care of a superannuated old nurse, in whose bosom has ceased to flow, (if it ever did), the milk of human kindness; or if a person has committed murder, he has only to summon a medical man, who for the *éclat* attending the case, may appear and swear that the criminal is laboring under insanity of some kind or other, and whether it is intellectual or moral, to a jury it is insanity; and as insane persons are not held responsible, the prisoner must be acquitted; and thus, by a species of logic known only to a jury, the criminal escapes punishment to again commit crime, knowing, if he can only fee a *clever* lawyer he is safe, as those gentlemen have the happy faculty to be able to establish the plea of insanity by the same facts which they often use to establish in other cases the sanity of a client.

Now, if the plea of insanity in its general signification, without defining the amount or character of said affection is to be entertained, it is impossible to convict a person of any crime; and the more heinous the offence the greater chance of escape, as the greater is the probability of the person being insane, morally at least, and if it is allowed as a bar to the fulfilment of contracts, no wonder that we hear of bankrupt laws and State repudiations being necessary for those persons who accept of such provisions. The majority are morally insane, and therefore require the protection of the law, for we suppose, that there never was a person who committed a crime but was morally insane, he

must be so by the very nature of the case, for no man, with the fear of God and the punishment due his crime before his eyes, would do so, his nature must be morally perverted, or else at that time he was not able to reflect upon the enormity of his guilt, or the certainty of his punishment, or must, as the lawyers in the indictment call it, be instigated by the devil. There then is no test of insanity, medically speaking, nor has the law defined the question, by which we may be enabled to judge. The test, then, as we have before stated, though not acknowledged by us, is comparative.

The effort generally made by lawyers for the benefit of criminal clients, is to establish delusion on some point or other, which, when once established, they argue by their peculiar logic, that delusion being an acknowledged symptom of insanity, the conclusion must be inevitable, that the other symptoms exist, although not yet probably developed, and therefore, their client must be acquitted. This peculiar system of reasoning may answer in law, but certainly would not answer in medicine. Establish this point by the testimony of medical evidence, and acknowledge it legally, and the necessity of laws may exist, but the use of them is abolished. Admit this fact, together with that of moral insanity, and it follows that no man can be punished, for all men have either lied, which is a symptom of moral insanity, or have erred in matters political or religious, and have so erred, by a false belief or delusion on some point, which led to this error. Thus, a great political party of the day, lately erred in the calculation of success; they certainly were deluded, for others were sure (and the result proved they were right) that they would be defeated. And again, a great many persons believing in a person by the name of Miller, supposed that the world would be destroyed in 1844, and they acted in full faith upon the belief of such being the fact, though the result has shown that these persons were laboring under a delusion. And at the present day, many are acting in accordance with the belief that the Lord is to come shortly to reign upon the earth, and that he has sent a person, who is the Prophet Elijah, to prepare the way for him; while others deny there is any God at all, or that there ever was such a person as Elijah. But who, for a moment, would doubt of the competency of those persons to transact business, fulfil contracts, or to be liable to suffer for criminal acts? None, we believe, but admit the former tests, and none of these persons would be liable for acts committed by them; and even those who undertake to decide the question of insanity, could, by these tests and the aid of a *clever* lawyer, prove the judge, jury, and lawyers to boot, to be insane, for none, composing this assemblage, but have lied probably, and if politicians, have lied certainly, and as for the brethren of the gown, they are acknowledged generally to be morally insane at least, for they either lie by word or act, in defending a case which they know to be unjust, or else they think different from honest men, which would constitute delusion.

We may talk as a late learned judge, on a case in this city, did of reason, judgment, taste, etc., but what does it all amount to at last, only the comparison of the expressed opinion of the patient, with the received opinion of the majority of society, and this functionary, we suppose, in accordance with his views on the subject of insanity, would have condemned the celebrated philosopher, Combe, as being insane; for, says Combe, "I never could tell the product of numbers multiplied of any amount, and

now," he adds, "I can hardly tell the product of nine times nine without going over the multiplication table until I reach that number." And if the received opinions of a majority are to be taken as the standard of comparison, what *is* insanity to-day, will not be insanity in a few years hence. Fifty years ago, and had Professor Morse said that he would have Washington and New York in communication in half an hour's time of each other, he would have, by this test, been a lunatic, and the judges of this day, had they then existed, would not have scrupled to commit him to a lunatic asylum. Or had the immortal Harvey lived in this day to have promulgated his doctrine to be now received, as it was when he first asserted that blood circulated in the arteries, he would have been arrested *instanter* by some kind, *interested* friend, and carried to the tombs, when two full-grown M.D.s would be summoned to sign a commitment for the philosopher, and while conversing with him a few minutes, for form's sake, and as he warmed upon the subject in trying to convince dunce No 1, that such was the fact of blood circulating in the arteries, his eye might gleam with the fire of genius, which would convince dunce No. 2, that he was laboring under some deficient cerebral organization, although his intellect would be as superior to his medical friends and examiner as an Egyptian pyramid would be to a dunghill. Or had Fulton lived in *this* day, instead of ploughing the Hudson with the mighty aid of steam, he might, perchance, find himself viewing that river from an iron-grated window upon the third story of lodgings furnished by the State, for the benefit of such erratic minds as his. And old gentlemen that are foolish enough to think of marrying their fat cooks or tidy chambermaids, must now remember that such doings are not permitted in New York, in this enlightened day, and young persons will be made careful that they marry with the consent of their friends, and be sure not to marry virtue and beauty if found in an inferior rank of life, unless accompanied with wealth, without they desire to be sent to the lunatic asylum, which now answers for the American Bastile, and warrants of commitment for *lettres de cachet.*

There being no tests of insanity medically, we must then rely upon, and be governed by, the opinion we may form for ourselves, and on this point we think physicians often err, not from a desire to do so, but from the too high regard they have for the opinion of some professional friend or other, who may be older, or who has had greater opportunities of seeing such cases; the true test of knowledge, in our estimation, is not what a man ought to know, but—how much he does know. If diseases of the mind were like medical and surgical diseases, in which the aid of the senses might be called in to assist us in our diagnosis, then we might depend upon the person whose senses were naturally, or by training, the most acute. But the connection of mind with, and governing matter, is so mysterious, that we can no more depend upon the examination of the mind of one man by the mind of another, than we can upon the description of a landscape or painting by a blind person, for the blind man may have all his senses very acute, except the one most needed, and although he may chance to be right, yet he may chance to be wrong; and in the same way the physician may possess every thing necessary to detect insanity except the firmness necessary to resist the opinions of others, or the moral firmness to give an opinion which may subject him to the censure of his medical *confreres*, or the

loss of his patrons, the loss of either entire, which is as great a loss to a physician as the want of sight to the blind man, or, it may so happen, that the physician, in attempting to examine the mind of a patient, is like the clown who attempted to give a description of the sun by looking through a tin horn; he did not discover any thing which he could understand, and therefore was convinced that there was no sun at all. Medically speaking, there is no certain test of insanity; legally speaking, there is none yet established; what then are we to be guided by, if called upon to give our testimony in cases of this kind? We would suggest the following as a symptom to be guided by, and rules as regards the behaviour of the medical witness—a symptom which, in our estimation, is not as often used as its worth entitles it to, is the comparison of the suspected mind by itself, and not by other minds, that is, to compare the act which the person is tried for committing or performing, with other acts anterior or subsequent to the one in question. This is the only way by which we can arrive at a conclusion, even if unsatisfactory, for who will undertake to draw the line of demarcation and say, All who are beyond are sane, and all on this side are insane. And in giving his evidence the physician often errs, as we before observed, not from a desire to do so, but from a want of confidence in his own powers of observation,and often he does more harm to the party which he intends to benefit than good, thus, he hears the testimony of the medical evidence against the supposed insane party, and he has a high respect for the person thus giving his testimony, and he immediately begins to doubt, supposing that he may have erred in his opinion, forgetting that his medical brother is just as likely to err as he is, or if asked his opinion of the medical evidence which he has heard in opposition to his own, instead of giving the court and jury to know that he respects his own opinion, and that his professional brother is as likely to be mistaken in the case as he is, he immediately launches out into an eulogium upon his opponent's professional character, qualifications, &c., thus giving them to understand that he himself may be mistaken, but his professional brother on the opposite side cannot be—an understanding which the counsel opposed to his testimony is not slow in improving to *their* advantage. Now, in such cases, it becomes the medical witness to be circumspect how he acts, that he is either not made to contradict himself, or be held up to the ridicule of the court by the *learned* counsel of one side or other; physicians are usually considered fair game by the lawyers, and therefore they should be careful how they make, what, to them, may seem insignificant admissions, for we have known counsel so crafty and ingenious as to use the same words used by the witness, but convey quite a different meaning intended by him, to the jury. We were pleased at the behaviour of a medical witness on a late case which we have noticed, that occurred in this city. A juror, asking the witness a question in regard to the appearance of the party said to be insane, spoke in rather a low tone of voice, upon which the witness requested the juror to repeat the question in a louder tone, upon which the counsel opposed to his testimony repeated the same words, but placed them differently, in order to mislead, so that the question would be what is termed a leading question, upon which the witness, turning to the counsel, told him to mind his notes, and allow the juror to clothe his ideas in his own language, and when it came *his* turn to cross-examine, he would answer *him.* A rebuke at once cor-

rect and just, and which the counsel felt, as he immediately afterward dismissed the evidence. And if all our legal brethren were served as properly, we would see less of the brow-beating practised by those gentry, not for the purpose of eliciting truth, but for the purpose of puzzling and confounding the testimony of the medical witness, and we would see less of the smile on the face of court and jury in anticipation of the fun expected by the worrying of the doctor by the lawyer, when they are so fortunate as to catch one upon the witness stand. One thing more we would observe, in conclusion—that the medical man be careful in his *investigation*, when called upon to sign a commitment—for often is a physician summoned to investigate the case of a person said to be insane by parties whose interest or inclination is to prove such to be the fact, and the physician should he careful that he does not allow the cruel tales and colored representation of facts by said parties, to influence his mind, and instead of leaning to mercy, and trying to prove the party sane, he takes it for granted that the party is insane, and he tries to establish *such* to be the fact, thus allowing himself to be made the dupe of designing and crafty individuals, for it has happened to physicians that, allowing their minds to be prejudiced by interested parties, that often acts and thoughts, which, *per se*, would have passed with him as freaks of fancy, yet by his prejudiced imagination has been tortured into evidences of insanity; as a physician once, whose mind was so prejudiced by interested parties, that he swore to the patient laboring under deficient cerebral organization, from a glance of the patient's eye. And medical men should remember that it is much easier to establish a person's insanity, when once suspected, than to establish their sanity, as we suppose many of our readers will remember, was the case in that of Mr. Davies, the London tea-merchant—for the very acts which some persons would pronounce as evidence of prudence and wisdom, others can be found to believe are so many evidences of want of prudence and wisdom, or a want of the knowledge of the proprieties of life, although the difference between the suspected party and the evidence, in point of intellect, may be as great as between the brilliant sun of noonday and the twinkling of the midnight taper. And a medical man should likewise remember, that because a person is committed to a lunatic asylum, it does not, by any means, follow that he is really insane, as late cases in this city testify; and above all things, a physician should be careful not to allow his name to go to a commitment unless he is really and fully satisfied himself, that what is stated in that commitment is really and truly correct; if the suspected party is not what therein is stated, we must look upon the medical man who would sign such a document as a perjured person, whose signature is to be had for his fee, at any time. It has been urged by physicians, in extenuation of committing parties to such institutions as lunatic asylums, etc., in order to prevent the consummation of marriage and other acts or contracts, in order to enable the friends opposed to such acts to interpose the aid of the law,—that they did not think the parties were really insane and unable to take care of themselves, or were dangerous to themselves and society if suffered to run at large, as the commitment certified, but that they signed the commitment, in order to prevent the party having an opportunity of fulfilling such engagements until the law could have time to be interposed; as the party, in their estimation, did not know, or was not aware of the

train of circumstances that would spring out of the fulfilment of such contracts as well as the physician was; and by this means prevent trouble to the party committed and their friends; thus making, in the physician's act, the end to justify the means. This may be a salvo to some men's conscience; but we hope and trust, for the dignity of our profession, and the honor of human nature, that they are few. A medical man, we think, has no business with the abuse of the law; that belongs to another tribunal; nor do we think he should lend himself, because he has the power, to be made a tool in the hands of crafty lawyers or designing friends, to help them on in their nefarious practices, and for sake of patronage or a fee allow his mind to be biased by their representations. We like the old adage, every man to his business; and we would add, as an improvement, every man to his business, and doctors stick to the truth; and we must always think the physician guilty of perjury that will swear to anything but the rigid truth, no matter what are the circumstances directly or indirectly connected with the case.

ART. IX.—*Extracts from the Recorded Proceedings of the New-York Medical and Surgical Society.*

REGULAR MEETING, Dec. 5th, 1846.

DR. BUCK stated, that a patient had presented himself at the hospital who was a remarkable instance of the cancerous diathesis. He was a man forty years of age, and, according to his own statement, up to May last, he had for thirty years enjoyed uninterrupted health. At that time he noticed a hard pimple on the left heel, which remained without inconveniencing him for twelve weeks. A physician whom he then consulted made some caustic application to the pimple, *which converted it into an open ulcer.* A fortnight afterwards a hard lump made its appearance in the groin, and soon similar lumps showed themselves along the inner part of the thigh and down the leg. He lost his appetite, and became weak and emaciated. On his admission into the hospital an irregular ulcer was found covering almost the entire plantar surface of the heel, presenting nothing peculiar in its appearance. Along the inner aspect of the thigh a chain of scirrhus tumors extended in the course of the absorbent vessels. The largest of these was situated at the groin, and extended into the pelvis; below was one smaller, but more advanced, traversed by darting pains, the skin over it being shining and soft to the touch. Still smaller ones extended along the inner side of the calf to the malleolus. There were similar tumors in the neck, embracing the lower cervical vertebræ, tender to the touch, and causing, by their pressure on the cervical nerves, pains in the shoulder. For a week previous to entering the hospital, the patient had suffered under diarrhœa. He was sallow and much emaciated; the pulse was feeble, the tongue glassy, showing no traces of papillæ, and and appearing abraded on the left side. The tibiæ of both legs seemed enlarged, while over that of the left leg there was a cicatrix, which he stated occurred when he was a boy, from ulceration and exfoliation of bone having followed exposure to cold. The diarrhœa, though somewhat checked, still continues, while the disease seems spreading rapidly

to the mesenteric and other deep-seated glands of the trunk. Dr. Swett inquired if the disease might not be tuberculous instead of cancerous, and asked if the patient was of a scrofulous constitution. Dr. B. stated that he was, but that the swellings had all the characteristics of scirrhus, and that around the affected glands there were little lumps in the skin having the feeling of scirrhus when it attacks that organ.

There had presented itself likewise at the hospital a case of acute pityriasis, a very rare disease, and one which is mentioned by Rayer alone among writers on disease of the skin. The patient, a fireman on a steamboat, had for twenty years been affected with psoriasis palmaris of both hands, together with an eruption on the bridge of the nose. The pityriasis appeared suddenly about two weeks previous to his entering the hospital, and with the exception of two or three narrow spaces on the chest, suddenly spread over the whole body from the scalp to the heel. The surface was curved with thin scales on a red ground. There was no constitutional disturbance. The characteristic marks of the complaint are, 1st, the large size of the scales which are as big as a sixpence, though not so thick; 2d, their leaving when raised an oozing surface; 3d, their extent,—psorias or lepra never covers the entire surface; 4th, the rapid manner in which the disease extends. The treatment so far had consisted in the administration of bran baths, and the patient was improving under them. Dr. B. proposes by and by to order sulphur baths, if necessary. This is the second case which had come under the Doctor's observation. The first was cured by simple baths alone.

Dr. Buel has lately seen a case of uterine disease, which interested him, as illustrating the history of the complaint, when not treated or treated inefficiently. About a year ago he was consulted by a young married lady, with a child of six months old, for what she supposed to be prolapsus uteri. He examined her both by the touch and by the speculum. He found the uterus *in situ*, but there was a granular erosion of the os. The patient suffered from the usual peritoneal tenderness, pain in the back, and a distressing sensation of falling and dragging. She was unwilling to submit to the appropriate treatment, and passed from under Dr. B.'s care. A day or two since he was again called to her. He found that during the year the ulcer had made some progress to cicatrization, as it was smaller than when he had previously examined the patient. It was about the size of a shilling, encircled the os, and extended into the cervix. The pain and sensation of dragging and falling had increased in severity. The patient menstruated regularly, and there was an almost entire absence of leucorrhœal discharge.

Dr. Adams had lately attended a case of hemorrhage from the intestines, which seemed to depend upon the presence of hardened fæces in the colon. The patient, a lady 25 years of age, of slender habit, was attacked suddenly, and before she was seen by the Doctor, had passed near two chambers full of blood; she was not alarmed, having suffered previous attacks which had been attributed to the presence of hemorrhoids; the blood however was of a bright arterial color. The Doctor directed the patient to keep her bed, and ordered her some pills containing 2 grs. of acetate of lead and half a grain of opium each. The patient, however, insisted upon rising to evacuate the bowels. The

hemorrhage ceased after three pills were taken, and she remained in a comfortable condition. On the evening of the following day the hemorrhage recurred. Cold astringent injections, followed by an ice suppository, were ordered. She still insisted on rising whenever her bowels were moved. Considerably more blood was passed, the quantity *in all* amounting to three or four quarts. Retching and vomiting of bilious matter now came on, which resisted all the ordinary remedies: effervescing mixtures, anodynes, sinapisms, etc., to the epigastrium. Dr. Stevens being called in consultation, an examination was made, to ascertain if hemorrhoids were present, but none could be discovered. As no feculent matter had been passed for three days, Dr. A. proposed the administration of a small dose of sulph. magnes., and half an ounce was accordingly given, which was immediately rejected. The patient was kept quiet, and cold drinks employed, but the hemorrhage recurred from time to time, and the stomach remained irritable. The next day the gastric symptoms again became prominent. The patient was ordered 10 grs. of calomel; this was retained for two hours, when bilious vomiting supervened. The hemorrhage seemed arrested; towards evening large injections were administered without effect. The patient being much prostrated wine-whey was ordered. This relieved the patient very much, quieting the irritability of the stomach, and procuring her sound sleep. In the morning injections were again administered, but the bowels still not being moved, towards evening O'Beirne's method was employed, and a stomach tube being introduced a large enema was thrown into the colon. This was retained for half an hour, at the end of which time the patient passed an immense quantity of scybala. All the unpleasant symptoms now disappeared, and the patient became convalescent. Enemata have since been given, and scybalæ continue to come away. Was the presence of the scybalous masses in the intestine the cause of the hemorrhage? The patient had been more or less constipated for several years, finding it constantly necessary to have recourse to purgative medicine. For two days before the attack she had suffered from a sensation of distention about the abdomen, which had been so great as to prevent her lacing her dress.

Dr. Earle had had at the asylum a number of cases of a disease, rare in this country, but comparatively common in France, and somewhat so in England, the general paralysis of the insane, (the *paralyse générale* of Kal.) He had never met with any recorded cases in the United States, and some twelve or fifteen only had been hinted at. He had had in all thirteen cases, all males. During the last eighteen months, there had been quite an accumulation of them at the Asylum, six or seven being there at the same time. He would now make a few remarks founded on these cases. The disease commonly occurs in men who have been free livers, some of them intemperate. It is long in its incipient stage, the patients being exceedingly eccentric in their conduct. In France it occurs as a sequel to ordinary mania. As to the physical symptoms; in the first place there is a difficulty of speech, hard to describe, but readily detected by the ear. Sometimes the patient drops the last syllable, at other times the words are run in together, sometimes he hesitates or stops in the middle of a sentence, occasionally the speech is entirely lost. Dr. Earle here illustrated the manner of speaking, by imitating the mode in which a patient who

died some time since, and who fancied himself at once President and Vice President of the United States, pronounced his imaginary title, omitting the pauses, and running the words together, and pronouncing the letters indistinctly.

2dly, there is a tottering in the gait, an instability in walking, differing in different persons. In one case the knee would give way, as if the patient had been struck a smart blow in the ham, and he would almost touch the ground before he could recover himself. In another case the patient would totter like a child first attempting to walk alone. In other cases again the difficulty was most obvious when the patient was directed to walk in a straight line to a particular object, when a vacillation in his progress, and a degree of effort in endeavoring to maintain it, would become apparent. This difficulty in locomotion increased as the disease advanced, and occasionally proceeded to complete paralysis. In one case a short time before his death, the patient lost entirely the use of both his legs and arms. In the latter stages of the disease the feet become œdematous, and finally the œdema attacks the hands. In the majority of cases sloughing and ulceration take place, commencing commonly on the lower extremities. The ulcers, at first small, rapidly extend and increase in depth, and often penetrate to the bones. In one case they occurred on the legs, arms, and on different parts of the body. There is commonly some tendency of blood to the head. The pupils are almost invariably unequal in size. In three cases the patients were occasionally entirely blind, walking directly against the wall, or other obstacle, as if it were not in their way. All of the senses were more or less affected, smell and taste most commonly and in the greatest degree, hearing to a slighter extent. Some of the patients would take rhubarb and magnesia, without distinguishing the taste from that of wine. In all the patients the general sensibility was either obtuse or entirely lost.

Of the mental condition of the patients, one of the most constant phenomena was the exalted sense they entertained of their dignity and importance. They were kings, presidents, generals, etc. This is not uncommon in mania, but in this form of it was almost universal. The patients were not only powerful, they seemed contented and happy. During the past summer the worst patients in the Asylum, the most filthy and destructive, were three men affected with this form of insanity. On account of their habits their garments were of the commonest material and coarsest texture, and their furniture was limited to the straw bed on which they slept. These patients, on being asked if there was anything which they wished, replied, "No, they were perfectly contented and happy." While thus happy, they are commonly irritable, and are readily exasperated. In the early stage of the disease, the patient is often ludicrously eccentric in his conduct. A man who had been sent to the Asylum was removed home a few days afterwards by his wife. On reaching his house he caused a warm bath to be prepared, in which he put the entrails of fowls, Cologne water, pepper, etc., and bathed all his children in it. He afterwards had a soup prepared of nearly the same materials, and fed them with it until they vomited. He was then brought back to the Asylum. Connected partly with the loss of command over the voluntary muscles, is a change which takes place in the hand-writing of the patients. One of them who before his illness wrote a remarkably fine hand, while still able

to walk about and converse, asked for a sheet of paper to write a letter to his wife; when the paper was returned, it was found that he had completely covered it with waving lines resembling the pot-hooks of children commencing to write. Another mental peculiarity of the patients is an idea that they have much and important business to transact. They are constantly occupied. One of the patients, a cap-maker, confined on account of his filth and violence to a room in which there was nothing but a straw bed, was constantly found in the morning, the straw broken and strewn about, busily employed in cutting out and making up caps, for which he had extensive orders.

The treatment of the disease is merely palliative, and directed to the relief of particular symptoms. Nothing seems to have any effect upon its progress.

On *post-mortem* examination of those affected with this complaint, the arachnoid covering the superior surface of the brain is commonly found opaque and thickened, and there is effusion between it and the pia mater. The vessels of the cineritious matter are commonly a good deal engorged, but Dr. E. has never noticed the darkening and blackening of that matter, like ecchymoses, noticed by French writers. There is almost always softening of the fornix and the parts in its immediate neighborhood. There is degeneration and softening of the middle lobe of the brain. In one case in which it extended to the thalami and corpora striata, the patient, for the last day of his existence, lost entirely the use of all his limbs. The spinal marrow was not examined.

The patients were all of them of middle age. Abroad some females have suffered from the disease, but comparatively the number is small.

Dr. Post stated that there was now in the hospital a curious instance of complete loss of the male genital organs, the penis, scrotum, and testes being entirely gone. According to the patient's account, two years ago he was exposed to intense cold, and the organs were consequently attacked with gangrene. Dr. P., however, has no doubt that the disease is of venereal origin. A simple fissure exists from the mons veneris to the perineum, the edge ulcerated and covered with vegetations. The general health is much impaired, but has improved somewhat since his entrance into the hospital.

Dr. Watts stated a child two years and nine months old had lately been brought to the College by a medical man; that when nine months old, being tied in a chair, it had thrown itself over, the leg being extended, the weight of the child's body and the chair itself had fallen upon the leg. A good deal of swelling had followed, and a country medical man having been called in, pronounced the injury a contusion. On examining the child, Drs. Watts and Parker came to the conclusion that the injury consisted in a dislocation of the head of the bone into the thyroid foramen. The limb was wasted, all the muscles and the ligaments were exceedingly lax, admitting great freedom of motion. The thigh could be doubled up upon the body, and the foot rolled in or out with ease. The limb was of no use in walking, and owing to want of development was an inch and a half shorter than the other.

Regular Meeting, Dec. 19th.

Dr. Buel stated, that he had lately been called to a young gentleman, who complained of fever, restlessness at night, and sore throat.

A cathartic was ordered and he was desired to remain in the house. There was, however, no improvement. He now directed the Doctor's attention to a swelling in the groin, which he attributed to cold. On being questioned, he at first denied having exposed himself, but finally it came out, that six weeks previously, he had had a suspicious connection; that this was followed after an interval of a week, by a swelling in the groin; that the swelling shortly afterwards subsided, and now had returned after four weeks' interval. There had been no sore on the penis whatever. Was the enlargement in the groin a "bubon d'Emblée," and the ulceration in the throat syphilitic? Dr. B. has put his patient in a mild mercurial course. It being suggested in doubtful cases, that inoculation, as practised by Ricord, would determine the syphilitic or non-syphilitic nature of the disease, several instances were mentioned in which that practice had been followed by troublesome sores, even when cauterization had been carefully practised. Dr. Buck stated that there was now in the hospital a young man with a well-characterized chancre on the middle and forepart of the thigh, which had existed for more than two years, and which the patient states had been produced by inoculation, he at the time laboring under primary disease.

Dr. Buck stated, that the patient laboring under scirrhus diathesis, whose case he had mentioned at the last meeting of the Society, had since died, wasted by diarrhœa. On post mortem examination, the body was found very much emaciated. The scirrhus tumours extending from the groin to the inner ankle were well characterized. They were hard, grating under the knife, in texture resembling an unripe choke pear, none of them were softened. The mass which extended into the pelvis, covered the large vessels as they passed over the pubis, and dipping down adhered to the wall of the pelvis. Contrary to expectation, the mesenteric glands were normal, nor was there any degeneration of the lymphatics of the great cavities. The lungs both contained rounded isolated masses of scirrhus, varying in size from a pea to a filbert, and for the most part near the surface. In other respects they were healthy. In the heart a single mass, about the size of an ordinary white bean, existed in the wall of the right auricle. The liver contained three or four masses as large as large filberts, near its surface; other masses existed so near the surface, that they could be felt without cutting into its substance. The pancreas was unaltered, the spleen denser than usual. Nothing was found worthy of notice in the mucous membrane of the stomach and small intestines. The large intestines were thickly scattered with small ulcers with abrupt edges, as if made with a punch. The mucous membrane was not swollen. Scirrhus deposite existed beneath and around the ulcer on the heel.

Dr. Garrish had lately attended a robust young woman, 18 years of age, in her first confinement. The child was born after two hours labour. The placenta was expelled half an hour afterwards. The patient remained comfortable and without any unpleasant symptoms for one hour and a half, when the doctor, who had remained with her, observed her gradually slipping down towards the foot of the bed. The muscles of the face commenced twitching, and the patient became convulsed. *Part of the time* the whole body was in a state of opisthotonos. Twenty oz. of blood were taken from the arm, causing syncope, cold

was applied to the head, two leeches were ordered to each temple, and ten grs. of calomel were administered internally. After the convulsion was over, she soon became sensible. In thirty minutes she was seized with a second fit. The vein was reopened and fifteen oz. blood taken, when syncope took place. An enema was administered, but without effect. There was no further return of the convulsions.

Dr. Post early last week, had been desired to see a patient in consultation, and to bring his obstetric instruments with him. On reaching the patient, he found that she was dead, and received the following history of the case. The patient had previously had two children. The first was delivered by instruments and was still-born. The second labor had been difficult, but the child had been born alive. Her physician, who had not previously attended her, was called to her on Saturday and remained during the night. On Sunday it was ascertained that the head presented, but the superior strait seemed contracted and the labor made very little progress. Towards night as the pains were very violent, and the child did not advance, the patient was bled and an anodyne ordered, after which the physician retired to get some necessary rest. In the morning, on seeing the patient, he found that not only the anodyne which had been ordered, had not been given to the patient, but that the women around her had given alcoholic drinks to increase the violence of the pains. About noon the patient complained of a sudden severe pain in the side like a stick, the pains began to diminish, and soon ceased entirely. At two o'clock, p. m., she died. Dr. P. immediately pronounced the case one of rupture of the uterus. On post mortem examination, it was found that the neck of the uterus was torn across, the rupture extending half way round the organ, the head was impacted in the pelvis and had not receded. The body and limbs of the child with the placenta were in the peritoneal cavity.

Dr. Post then related a case of amputation at the shoulder-joint, in a woman 68 years of age, who had been severely burnt on Friday last, by her clothes taking fire in consequence of the falling of a stove. The left arm was charred, the burn extending from the wrist to the shoulder, and on the under side of the arm into the axilla and upon the anterior surface of the chest. The patient was lethargic, with a small frequent pulse, and a cold skin. Brandy was taken freely, but the patient would swallow very little food. A distinct line of demarcation formed, but there was very little improvement in the circulation. After a consultation, it was determined to remove the limb. The operation was performed on Tuesday. A small piece of sound skin existing about the acromion was left, but the stump remains uncovered, as in the axilla the incision was carried through the burnt surface. In all about three or four oz. of blood was lost during the operation. The patient took stimuli and nourishment with great unwillingness and in small quantity. On the following morning she was induced to take some egg-nog with a piece of milk-toast, and her pulse fell from 150 to 130, and became fuller. After this she again refused both food and stimulants, and died on the Thursday following. Dr. P. has several times noticed this repugnance to take food and stimulus after severe accidents, when it was seemingly of great importance.

Dr. P. was called on Saturday to a case of tertiary syphilis, showing the remarkable interval that may exist between the primary and ter-

tiary forms of the disease. Twelve years ago the patient contracted primary syphilis, no secondary disease followed, and he remained for seven years, to all appearance, perfectly well. At the end of that time he was married. He afterwards was attacked with sore throat, which did not yield to treatment, and which spread along the pharynx and fauces to the nose wings, cartilages, and membranes all giving way before it. It then invaded the upper lip, extending to the angle of the mouth. There was a small opening leading to the nasal cavity, and below this an ulcerated surface extending nearly to the vermilion border of the lip. He has been now several years married, and has healthy children, one of them only a few months old.

Dr. STEWART stated that he had lately operated for lithotripsy on a lady from 45 to 50 years of age. She had been married at 20, and for ten years had not become pregnant. She was then injured by the overturn of a stage-coach, the pelvis being fractured. On her recovery she conceived, and was delivered by instruments. The symptoms of calculus afterwards developed themselves. The urethra was excessively irritable, but this was gradually overcome, the passage accustomed to the use of instruments for a short time previous to the operation, the bladder was daily injected with tepid water. On Wednesday the operation was performed with Jacobson's articulated brise-pierre. After the operation, the patient had a child. Since then she has done well.

Dr. BLAKEMAN stated, that he had lately had a number of cases of dysentery, as many as twelve, eight of them occurred in one family, and one case was fatal. An unusual occurrence at this season of the year.

Dr. GREENE stated, that a lady five months advanced in pregnancy, suffered a good deal from sickness at the stomach. One night on retiring, she took, as she thought, a little soda, but she perceived it had an unusual taste. Her husband on being appealed to, likewise perceived that it was not soda. She commenced vomiting, and despite the measures of a practitioner who remained with her, the vomiting continued nearly the whole night. In the morning Dr. G. found her much prostrated. On examination, the source of the mischief proved to have been arrow-root.

The following resolutions were then offered by Dr. Vandervoort :—

Resolved,—That in the deliberate opinion of this Society, the employment of all remedies, the exact nature of which is kept concealed, as well from the public as from the profession, is a departure from the strict line of medical ethics, and at variance with the true dignity and lofty character of the profession.

Resolved,—That the practice heretofore and at present, too much in vogue, of granting letters of recommendation upon subjects not purely medical, no less than upon those which are so, is fraught with evils of a serious nature, and is eminently calculated to foster the tendency to charlatanry, now too rife amongst us.

Resolved,—That the members of this Society have of late witnessed with deep sorrow, the encroachments which have been made upon the hitherto well-defined boundaries of the profession, they do now and henceforth discountenance all such proceedings, and will regard all who participate in them as acting contrary to the common weal and best interests of those engaged in it.

PART SECOND.

Critical Analysis.

ART. X.—*The Institutes of Medicine.* By MARTYN PAINE, A. M., M.D. Professor of the Institutes of Medicine and Materiæ Medica in the University of New-York, etc. New-York, Harper & Brothers, 1847. 8vo., pp. 826.

THE author of this work has attempted a hazardous and Herculean task, one which we sincerely believe no other physiologist would dare to undertake, we mean a defence of the doctrines of *exclusive solidism*. The Sisyphean effort of rolling the body of vitalism up the steep acclivities of fact and argument, has been reserved to the present age, and to the author of "The Medical and Physiological Commentaries," with what success, we may not say, another generation, if not the present, will decide the issue, and mete out justice with an even balance. But whatever may be the merits of this great and momentous question, we have always cheerfully conceded the consummate skill and learning with which the controversy has been maintained, by the laborious and indefatigable author of the present work; to say that there is not to be found in the whole compass of medical literature, in this or other languages, such an array of facts and learning, of compact logic and far-reaching illustration, in defence of vitalism, as abound in the author's writings, is saying no more than will be granted by every one who has carefully surveyed the whole ground. The peculiar characteristics of the writer's mind are displayed on every page of his works; confidence in the truth of his cause, ardor and zeal in its pursuit, daring, if not contemptuous defiance to his opponents; these shine forth in every chapter and page, and are well calculated to beget conviction in the mind of the reader. The author announces that the "humoral philosophy has almost universal sway in Great Britain and France," he might have truly added, and in this country also. It remains to be seen whether his facts and reasoning shall effectually resist their sway, and reconquer the realms which a spurious philosophy, so-called, has won. We are told that if the present doctrines had been permitted to address themselves to the reason of mankind, truth would have enjoyed, at least, an equal chance with error; but the opposing school decided that it should be otherwise, etc. (p. 515). This imputation we fear will be deemed unjust, sweeping as it is, and is rather calculated to injure than sustain the cause which the writer advocates. The charge of infidelity, also, against the editors of the leading foreign reviews, had better have been spared, even were it founded in truth, which we do not believe; an imputation of unworthy motives, is an easy way to prejudice an opponent, but a still better way to prejudice him who makes it. We sincerely trust, that these and other passages of similar bearing, may be expunged from future editions.

The great body of the present work is devoted to an exposition of the

principles of PHYSIOLOGY, commencing with the "*Composition and Structure of the Body,*" and taking up successively the "*Vital Principle and its Properties,*" "*The Mind and Instinct, and their Properties,*" "*The Common and Peculiar Functions,*" "*Vital Habit,*" "*Age,*" "*Temperament, Constitution and Idiosyncrasy,*" "*Races of Mankind,*" "*Sex,*" "*Climate,*" "*Habits and Usages,*" "*Relations of Organic Beings to External Objects,*" "*Death.*" The second part treats of PATHOLOGY under the heads of "*Remote Causes,*" "*Pathological or Proximate Cause,*" "*Symptoms,*" "*Morbid Anatomy,*" "*Inflammation,*" "*Fever,*" "*Venous Congestion,*" "*Humoralism.*"

The last part treats of THERAPEUTICS, under the heads of "*Cathartics,*" "*Astringents,*" "*Tonics and Diffusible Stimulants,*" "*Antispasmodics,*" "*Cinchona and its Alkaloids,*" "*Arsenic,*" "*Iodine,*" "*Ergot,*" "*Emmenagogues,*" "*Diuretics,*" "*Expectorants,*" "*Counter-Irritants,*" "*Remedial Action, its General Philosophy,*" "*The Seton,*" "*Local Sedatives,*" "*Warm Poultices, Genito-Urinary Agents, Uterine Agents, Blood Letting, etc.*"

A very full index of nearly fifty pages, enables the reader to turn readily to every subject treated of, and adds very much to the value of the work as a book of reference. Our limits do not allow, nor does the nature of the work admit, of an extensive analysis, apart from its controversial character, which we regard as a serious blemish, we can cheerfully commend it as embodying a vast amount of useful information, equally valuable to the student and practitioner of medicine. With the "COMMENTARIES," it will go down to late posterity, a monument of industry, genius, and consummate learning; an armory from whence the vitalist will draw his weapons of offence and defence, in all time to come.

ART. XI.—*A System of Human Anatomy, General and Special.* By ERASMUS WILSON, M. D., Lecturer on Anatomy, London. Third American, from the third London edition. Edited by PAUL B. GODDARD, A. M., M. D., Prof. of Anatomy, etc., in the Franklin Medical College of Philadelphia. With two hundred and thirty-three Illustrations by GILBERT. Philadelphia, Lea & Blanchard, 1847. 8vo., pp. 610.

IN the fall of 1844 we had occasion to notice the first edition of this work, since that time it has passed through two editions, and now its enterprising publishers have laid before us the third. The opinion then expressed, and recommendation offered, by the late much-lamented editor of this journal has been fully verified and adopted; as in many, if not all of the Colleges throughout the Union, it has become the standard text-book. This of itself is sufficiently expressive of its value. The present edition "is a careful and exact reprint" of the last edition of the English work, to which many "improvements and alterations" have been made by the author, "with the addition of such other illustrations as were deemed necessary to a more complete elucidation of the text" by the American editor; all of which render the work very desirable to the student—one, the possession of which will greatly facilitate his progress in the study of practical anatomy. The typographical execution compares well with the former editions.

S. S. P.

ART. XII.—*Handbook of Human Anatomy, General, Special, and Topographical. Translated from the original German of* Dr. ALFRED VON BEHR, *and adapted to the use of the English student.* By JOHN BIRKETT, Fellow of the Royal College of Surgeons of England, and Demonstrator of Anatomy at Guy's Hospital. pp. 487. Philadelphia: Lindsay & Blakiston, 1847.

THIS work, we are informed by the author, "is intended to afford the student a short and comprehensive detail of anatomical facts, suited to the practical tendency of The Pocket Encyclopædia of the Medical Sciences," by Dr. Minding and himself, now in the course of publication at Erlangen. The necessity of a set of class-books, short, concise, and purely elementary in their character, has long since been felt and wished for. We say this without intending in the least to reflect discredit upon the many truly valuable works which have already been presented to the profession; they are excellent, and well calculated and adapted to the use of the student during the interval of his absence from lectures. Then it is that he has more leisure, and can read the more elaborate works, but when fully engaged in his collegiate studies it is extremely necessary that he should possess text-books having the character we have just spoken of. The work before us, as its title indicates, treats of General, Special, and Topographical Anatomy. Of the first division, viz., General Anatomy, very little, if anything, is said in the former text-books on anatomy, if we except Dr. Wilson's, where the addition is made by the American editor. The importance of a good understanding of general anatomy to the pathologist should at least demand for it a passing notice from the student of medicine. The value of the doctrines taught by Bichat, and the discoveries since made by the use of the microscope in the study of this branch of anatomy, must be admitted by all. The sudden impulse given to the science of physiology and anatomy, since 1838, when Schwann presented to the profession his views and discoveries in relation to the elementary forms of the human body, demand of those who are desirous of keeping pace with the discoveries of the age, a more unreserved attention. It would be pleasing, had we sufficient space, to give an extended analysis of this portion of the work; but a single quotation must suffice:—

"a. *Elementary parts.*

"13. The first form from which matter is developed, and which lies as the basis of every organic structure (vegetable and animal), is, according to the general principle first enunciated by Schwann, 1838, the

"*Nucleated Cell*, that is, a microscopial, delicately membranous vesicle, with fluid contents and a minute dark nucleus (Cytoblast) in one of its walls, surrounded by an amorphous, solid or fluid, substance (Cytoblastema or Intercellular substance), out of which the nucleated cell forms itself.

The *nucleus* is round or oval, rather flattened, yellowish red, smooth or granular, has a diameter of 0·002—0·004''' and probably first arises, as the granules are deposited from the amorphous mass about a central point, are circumscribed and blend together. About the nucleus formed from the mass a membrane is generated, the vesicle of the cell [cell membrane].

"14. This process of development may at least be observed in the egg [germ] of vegetables and animals, in the formation and reproduction of certain tissues (for example, the nails and cuticle). Also in the blood, in pus, and in milk, the process is essentially the same. The

formation of the elementary granules may be compared with the physical phenomenon, discovered by Ascherson, namely, that when albumen was brought into contact with fat (oil drops) it coagulated in the form of a membrane, and enveloped them. But the vital and self-dependent progressive development of the nucleated cell is in no degree explained by this.

"15. *Increase of the Cells.*—The number of the cells in a tissue in the process of development, increases either by the origin of single new ones independent of one another (*e. g.*, in the hair, nails, inflammatory exudation); or by the development, in the interior of the old and mature, of new secondary cells, to which the contents of the primary cell serve as cytoblastema. (Thus, in the development of the liver, and in pathological growths; *e. g.*, Scirrhous.)

"*Metamorphosis of Cells.* As the cells pass through various stages of development, they also present different circumstances in respect to their shape, position, contents, and chemical relations. In some tissues they maintain their independence, at most lying upon one another, and becoming thereby flattened, or elongated and pointed (*e. g.*, in the granular pigment, in the blood, in the muscular tunic of the intestines). Others attain a size of more importance (fat cells), or diminish in size (the lymph globules, if they become changed into blood corpuscles); they lose after a time their nucleus (the mature blood corpuscles); their parietes become thickened (cartilage cells)."

The second division, Special Anatomy, can best be illustrated by a quotation or two, which we give:—

"*Os humeri* s. *brachii*, Bone of the upper arm.

"Position: between shoulder and forearm, on the sides of the chest.

"Length: reaching downwards to the second Lumbar vertebra, farther in Negroes.

"Direction: parallel with the axis of the trunk, yet rather oblique from above downwards, and without inwards.

"Figure: tubular, cylindrical.

"Connection: with the shoulder-blade and the forearm.

"a. Superior extremity with: 1. *Caput humeri*, a segment of a sphere, $\frac{1}{3}$; lies in the *Cavit. glenoid. scapulæ*, is surrounded by a circular flat groove, the *Collum humeri* of *Anatomists*, and forms an obtuse angle with the axis of the shaft of the bone. 2. *Tuberculum majus*, on the outer side, with three surfaces, for *m. supra-*, *infraspinatus*, et *Teres minor*. 3. *Tuberculum minus*, anterior, for *m. subscapularis*. 4. *Sulcus longitudinalis*, between the two tubercles, for the tendon of the *Caput long. bicipitis*. 5. *Spina tuberc. major*, for *m. pect. maj.* et *deltoid*. 6. *Spina tuberc. min.*, for *m. teres maj.*, *latiss. dorsi*, et *coraco-brachial*. 7. *Collum humeri chirurgorum* at the superior sixth of the humerus and the point of transition into

"b. The middle piece, *the body*. Superior half cylindrical, inferior, triangular, prismatic.

"1. Surfaces: external, below the superior third, a V shaped depression, for *m. Deltoideus*. Internal anterior surface, for *m. brachialis internus*, oblique from above, downwards, and from before, inwards, the course of the *Art. brachialis*, presents: *Foram. nutritium*. Posterior surface below very broad, for *m. triceps*.

"2. Edges, angles. Anterior, roundish, rough, the commencement of *spina tuber. major*. External, above indistinct, below, sharp, before curved, for *cap. intern. tricip.* et *supinator longus*. More obliquely below, likewise, sharp—from *Spina tuberc. minoris*—for *cap. intern. tricip.*

"c. Inferior extremity flat, broad; presents, from without inwards: 1.

Condylus externus, for the *extensor* and *supinator muscles*. 2. *Eminentia capitata* s. *rotula*, the small articular head, unites with the Radius of the forearm. 3. *Trochlea*, it receives the Ulna. Above it we find *Fossa ant. maj.* for *Proc. coronoideus ulnæ*, *minor*, for the *radius*;—posterior, for *Olecranon*. 4. *Condylus internus*, for the *flexor muscles*, *pronator teres*, and *palmar. long.*, behind with a flat groove, for *nerv ulnaris*.

"Structure. At the extremities spongy tissue, in the body compact substance and medullary cavity.

"Development commences early, second month, in the centre; both extremities still remain cartilaginous in the second year; then at the superior extremity, for *caput* and *tuberc. majus et minus*. three osseous nuclei appear; lastly, at the inferior extremity four osseous centres. In the eighteenth to the twentieth year the extremities first unite with the centre piece, the inferior soonest."

The following is an illustration of the description of the muscular system:—

"*Coraco-brachialis* (s. *perforatus Casserii*).

"Pos.: above, under *deltoideus*, in the centre between *pectoral. maj.* and *latissim. dorsi*, below at a similar elevation as the tendon of *deltoideus*; covers above, *Art. axillar.* and *brachial.*, *Nn.*, *medianus* and *musculo-cut.*, lies below to the outer side of *Art. brachialis*. Or.: *Proc. coracoideus* (apex). Ins.: *Os humeri* (inner border and centre) between *anconæus quartus* [short head of triceps] and *brachial. internus*. Use: presses the scapula and humerus towards one another; assists in drawing the arm to the chest. Antagonist to the rotators.

"Nerves: (first to third) *musculo cutaneus*."

The third division, Topographical, or the Anatomy of Regions, occupies about forty pages. The following will illustrate the manner in which this portion of the work is treated:—

"Lateral surfaces of the Neck, *Reg. supraclavicularis*.

"*Reg. sterno-mastoidea*. The *sterno-cleido-mast.* is covered by a loose fibro-cellular tissue, in which the *ven. jugular. extern.* descends from before backwards. It covers:

"a. Below (the *m. omohyoideus*): 1. Loose fibro-cellular tissue, wherein is a branch of *ven. jugul. extern.* (anter.) 2. The deep layer of *fasc. cervical.* and *m. omohyoideus*. 3. The external border of *m. sterno-hyoid.*, and *thyreoideus*. 4. The junction of *vv. jugular. intern.* and *extern.* behind *articul. sterno-cleidoidea* (in the angle the *duct. thoracicus* opens). 5. *N. phrenicus* outside (close to *scalenus antic. m.*), 1″ distant from *n. vagus* (close to *carotis commun.*); between the two, *n. sympathicus*. 6. Right, the superior extremity of *truncus anonymus* (*caro'is.* and *art. subclav. dextra*); left, *carotis comm.*, *art. subclav. sinistra*. 7. Right, *n. recurrens*; left, *ductus thorac.*, the superior extremity of the pleura. 8. *M. longus col'i* and vertebral column. The *carotis* lies 1″ removed from the anterior border of *m. sterno-cleido-mast.*; the right rather *nearer*.

"b. Above (between *omohyoid.* and *splenius*): 1. *Plex. cervical.* 2. *Art. cervical. ascend.*, *m. rect. antic. cap. magn.*, *scalena*, *levat. scapul.*, *splenius colli*. 3. *Proc. transversi* and *art. vertebralis*. Quite above, *splenius capitis*, &c.

"2. *Trigonum cervicale inferius*, supraclavicular fossa, a triangle, the base of which is formed by the claviculæ (the first rib), the sides by

the anterior border of *m. cucullaris* and the posterior of *sterno-cleido-mast.*, and which is divided by the post. belly of *m. omohyoideus* into an inferior smaller, and a superior larger triangle.

"Position of the parts: 1. Skin, *m. platysmam.* 2. Before, *v. jugular. extern.*; above, *nn. subcutan. colli, accessor. Willisii.* 3. *M. omohyoid.* and the deep layer of *fasc. cervicalis.* 4. *Art. transversa colli, supraclavicular., ven. subclavia* (between the first rib and clavicle). 5. In front, *scalenus anticus* (on the internal border of which *n. phrenicus*); behind, *scalenus med.* (and *post.*); between the two, above and outside the origin of *plex. brachialis;* below and within, *art. subclavia,* upon the first rib, close to the tubercle, separated by *scalenus antic.* from *ven. subclavia.* External to the *scaleni* the artery lies close behind the vein, in the direction of *m. omohyoid.* 6. The transverse processes of the cervical vertebræ, *mm. intertransvers., art. profund. cervic.* and *vertebralis.*

"Posterior surface of the neck, nape, *cervix.*

"[*Dissection.* 1. An incision should be made in the middle line, through the skin only, from the chin to the sternum. 2. From the mastoid process to the acromion. 3. From the mastoid process to the centre of the upper border of the sternum.

Two triangular flaps of skin are thus formed, attached by their bases, the one, above, to the horizontal ramus of the lower jaw; the other, below, to the clavicle. These are to be reflected upwards and downwards. The *platysma myoides* is to be dissected, the course of the external jugular vein examined, and the muscle divided transversely and reflected. The parts above described occupying the various regions, the boundaries of which should be accurately defined, may be now exposed and dissected in succession. TRANS.]"

The value of this portion of the work is much increased by the additions of the English editor, who has given short and concise descriptions of the best mode of dissecting the several parts or regions. Taken as a whole, the work, the short review of which we have now given, has exceeded our expectations, and is admirably adapted to the end desired by the author. We would most heartily recommend it to the medical student of our country, as a text-book during their attendance upon lectures. The size is convenient, the index full and complete, and for typographical execution we have seldom seen its match. Our thanks are due the publishers for presenting it to the American profession.

S. S. P.

ART. XIII.—*The Principles and Practice of Ophthalmic Medicine and Surgery.* By T. WHARTON JONES, F. R. S., Lecturer on Anatomy, Physiology and Pathology at the Charing Cross Hospital. Foreign Member of the Royal Medical Society of Copenhagen, etc., etc. With one hundred and two illustrations. Edited by ISAAC HAYS, M. D., Surgeon to the Wills Hospital, etc.—Philadelphia: Lea and Blanchard. 1847. 8vo., pp. 509.

THIS is one of a series of manuals published by Mr. Churchill of London, and republished in this country by Messrs. Lea & Blanchard, "the design of which is to furnish to the student, within a small compass, a complete and comprehensive digest of the several subjects of which they treat." The reception of the works of Drs. Carpenter

Wilson and others, prove how well the design has been carried out in the works heretofore published. The author of the work before us is already favorably known to the profession by his previous contributions to ophthalmic medicine and other subjects belonging to medical science. Mr. Jones' qualifications for the successful performance of the task undertaken, would lead us to expect a complete digest of the practical facts relating to the pathology and treatment of the diseases of the eye. In this expectation we are not disappointed. The treatise presented to the profession, by Mr. Jones will, we hope, be introduced into the medical schools, and become the text-book of the student for a long time to come; from it the practitioner of medicine, who is engaged in active business, and who has not time to refer to the more elaborate works of Middlemore, Lawrence and Tyrell, will find here the *practical facts* necessary to guide him in treating the various morbid conditions of the eye.

Mr. Jones commences the introduction to his work by giving a very short sketch of the peculiarities, history and literature of ophthalmic medicine and surgery. Chapter first is divided into two sections, the first treats of "Ophthalmoscopy, or Exploration of the Eye, in order to a diagnosis." Section second, of the "Application of Remedies to the Eyes or their neighbourhood, and performance of minor operations on them." In this last section the author has some judicious and excellent observations on the use of cold and warm applications, which we copy:—

"*Cold applications to the Eyes.*

"*Cold lotions.*—Cold spring water is the best cold lotion. It is applied by means of compresses of old linen or lint, which should be broad enough to extend over the neighboring parts as well as over the eye, but not so heavy as to press unpleasantly. When once commenced, the application of the cold lotion requires to be assiduously kept up as long as is necessary, one compress, as soon as it becomes warm, being replaced by another just taken out of the water.

"*Cold douche bath.*—This consists in a fine stream of cold spring water allowed to play on the closed eye and neighboring parts. The application may be continued for about a quarter of an hour at a time. There are particular douche apparatuses. A simple form of one may be readily constructed with a glass tube of the thickness of a barometer tube, and from three to three and a half feet long, bent like a syphon six inches from one end, whilst at the other it is drawn out small, and also bent, but only for about two inches; the short limb of the syphon being immersed in a vessel of water placed at a convenient height, the air is sucked out at the small end, when a fine stream of water will issue from it.

"*Dry cold.*—In the weak and rheumy eyes of old persons, and in a similar state remaining after an attack of ophthalmia, it is often agreeable, and indeed, productive of great relief, occasionally to draw some cold body across the eyelids. For this purpose a long slender bottle with a smooth round bottom, and filled with ice, has been recommended.

"*Warm applications to the Eyes.*

"*Warm cataplasms and fomentations.*—As applications to the eye, fomentations are much more convenient and elegant than poultices. Warm water simply may be used for the purpose, or chamomile decoction, poppy decoction, and the like. The application is made by means of compresses, as just described for cold lotions. The application requires only to be made occasionally, and that merely for a period of from five minutes to a quarter of an hour at a time. Warm cataplasms and fomentations should never be allow-

ed to become cold on the eyes. After their removal, the eyes are to be gently dried with a soft linen cloth, and care taken that they be not exposed to a draught of air.

"*Watery vapors.*—In order to receive watery vapors on the eyes, the patient holds his face over a vessel containing hot water; a cloth being thrown over all. When it is wished to have steam play more directly on the eye, a funnel is inverted over the vessel, and the tube directed towards the eye at a proper distance. After the application, the face and eyelids are to be well dried, and exposure to any draught of air carefully avoided."

This section also treats of the removal of foreign particles or substances from the eye, a part of which we give:—

"Caustic, or hot substances, whether solid or fluid, getting into the eye, so quickly exert their action, that much, if not all, the injurious effects have already occurred before means can be taken for their removal.

"While solid caustic substances are still in the eye, the best application to make in the first instance is sweet oil. After that, the surgeon may proceed to remove the foreign substance, and to effect this some pains will often be required, especially if it has been lime or mortar, for the particles of these substances are apt to adhere very closely to the conjunctiva. Exploration of the palpebral sinuses should not be neglected lest pieces may have lodged there. After the eye has been freed as completely as can be done from particles of lime or mortar, water should be injected into the eye in order to carry away what remains of the caustic may exist.

"When gunpowder has been exploded into the eye, besides the burn which results, the grains may fix in the conjunctiva and in the cornea—in which case, unless carefully picked out, they will leave indelible marks and opacities.

"Particles of such substances as potass, nitrate of silver, etc., getting into the eye, quickly become dissolved in the tears, and their injurious operation may spread like that of a caustic fluid, before they can be removed.

"In this case, and in the case of caustic fluids, the application, in the first instance, should be some substance calculated to decompose them and render them inert, so as at least to arrest their further destructive action; thus, in the case of sulphuric acid, which has sometimes been thrown into the eyes of persons with a criminal intention, a solution of subcarbonate of soda—gr iv. aq. ℥j, or magnesia suspended in water, should be immediately used as a lotion and injection for the eyes.

"Simply hot substances, such as melted tallow, pitch or lead, quickly cool of themselves, and all that requires to be done in the first instance is their removal. If pitch cannot be readily removed, sweet oil will promote its separation."

Chapter second treats of "Ophthalmic Inflammation." In section first of this chapter, Mr. Jones has taken the opportunity to speak of "Inflammation in general," giving a short account of its phenomena, terminations, varieties, and mode of action of remedies in inflammation. The remaining sections of this chapter treat of the inflammation of the eye and its consequences.

Chapter third treats of "Dropsies, Tumors, Cancers, etc., of the Eyeball," "Cataract, Operations for Artificial Pupil and congenital defects of the Iris and Pupil." Chapter fourth, of "Abnormal states of the Optical Refractions and Adjustments of the Eye, and Vision of Object in and on the Eye." Chapter fifth, of "Amaurotic Affections," "Impairment and loss of Sensibility of the Optic Nervous Apparatus, or Amaurosis in its various degrees," and "Glaucoma and Cat's Eye." Chapter sixth, of "Loss of Correspondence of the Sensations and Movements of the two Eyes." Chapter seventh, of "In-

flammations and Ulcerations of the Eyelids," of "Abnormal position of the Eyelids, Misdirection of the Eyelashes, Irregularity and loss of Movements of the Eyelids," etc.; "Morbid connections of the Eyelids," "Tumors, Cancer, etc., of the Eyelids and Eyebrows." Chapter eighth, of "Diseases of the Conjunctiva," and "Diseases of the Semilunar Fold and Lachrymal Caruncle." Chapter ninth, of "Diseases of the Lachrymal Organs." Chapter tenth, of "Diseases of the Orbit;" and Chapter eleventh, of "Injuries of the Eye." There are some portions of this chapter that we cannot refrain from quoting here. In speaking of this subject, Mr. Jones says:—

"Chips of pure metal, splinters of glass, stone, hard wood, and the like, projected against the eye, often stick, more or less deeply, in the cornea, or even wholly penetrate it, and lodge in the interior of the eye. If a part of the foreign body remains projecting, very great irritation ensues, but if the body has sunk fairly in the substance of the cornea, it may produce little reaction, or, becoming enveloped in a capsule of lymph, may cease to be a cause of irritation, and the inflammation, to which it has given rise, subside, the cornea at the part remaining opaque. More frequently, however, ulceration of the cornea takes place around the foreign body, which thus becomes loose at the bottom of the ulcer, requiring but a touch for its detachment.

"When a chip of pure iron sticks in the cornea, and is allowed to remain any time, it becomes oxydated, and tinges the adjacent cornea of a brown color.

"If any part of a foreign body which has penetrated the substance of the cornea projects, it is to be seized with a forceps and drawn out; but if it does not project, it is necessary to use a pointed instrument, such as a large and rather blunt cataract needle for its dislodgment. In doing this, great care should be taken not to cause any abrasion of the cornea, and never to scrape it, with the intention of removing, for instance, the brown speck left by the oxydation of a fragment of iron—as such a speck it is well not to interfere with.

"When the foreign body is irregular in shape, and has penetrated the cornea obliquely, and to some extent, it may be necessary to make an incision with a cataract knife, so as to expose the body, which is then to be seized with a forceps, or turned out with the spatula.

"It is to be observed, that when a foreign body cannot be readily got at, attempts at extraction should not be continued too long, for more injury may result from this than from the presence of the foreign body. By and by it will become loose, and may then be more easily extracted.

"*Abrasions of the cornea.*—Though the surface of the cornea may be touched without inconvenience, a sudden wipe on it, with a handkerchief, for instance, causes considerable uneasiness, lachrymation, and intolerance of light for a time.

"Abrasion of the cornea is sometimes produced by a scratch of the finger nail, or by awkward attempts to remove a foreign body; or it is the result of a stroke with an ear of corn, an accident to which reapers are much exposed."

"*Treatment of inflammation excited by injury of the cornea.*—The inflammation may be very slight and readily subside by rest, cold lotions, and antiphlogistics.

"The result of injury of the cornea, however, even when trifling in degree, is not always so slight. The inflammation is sometimes severe, obstinate, and dangerous, involving not only the cornea itself, but also other parts of the eye, both external and internal. The membrane of the aqueous humor is particularly liable to suffer; and iritis on the one hand, and inflammation of the proper substance of the cornea, ending in purulent infiltration, on the other, are not unfrequent complications.

"A severe form of inflammation is often met with in reapers, who have had

the cornea abraded by a stroke from an ear of corn, though a similar inflammation often arises from other injuries of the cornea. The patient presents himself to the surgeon with the cornea muddy and of a greenish-yellow hue, the iris discolored, and pupil contracted, with considerable conjunctival and sclerotic injection, such as is seen in catarrho-rheumatic ophthalmia. These objective symptoms are accompanied by fever, severe circumorbital or temporal pain, aggravated at night, and dimness of vision.

"If the inflammation be allowed to run on, or if treatment fail to arrest its progress, purulent infiltration of the cornea, hypopyon, and effusion of lymph into the pupil, may take place singly or together. The ultimate result is loss of the eye, either by the bursting of the cornea and the formation of staphyloma, or by atrophy.

"In such a case mercury is our principal remedy, after the abstraction of blood. The extent to which venesection should be carried ought to be carefully regulated by the circumstances of the case; it is not to be dreaded too much on the one hand, nor, on the other, pushed, by repetition, too far. The pupil is to be kept dilated by belladonna, smeared on the eyebrow; and when the progress of the inflammation is arrested, the exhibition of bark, as a general remedy, and the application of the drops of the bichloride of mercury with vinum opii as a local remedy, will powerfully promote the cure.

"In illustration of the dangerous nature of the inflammation which is apt to take place in consequence of abrasion of the cornea in reapers, it is mentioned by Professor Walther, of Munich, in a small work, published thirty years ago, that in the Isar district of Bavaria from fifty to sixty eyes used to be annually lost, during harvest, from this cause."

On the subject of "Poisonous Wounds, and Burns and Scalds," Mr. Jones remarks:—

"When the eyelids happen to be stung by wasps, bees, or the like, there are considerable swelling and irritation, sometimes severe erysipelatous inflammation of the part, ending in the formation of a small slough.

"If the sting of the insect has been left in the wound, an attempt should be made to extract it. Whether this proves successful or not, the part is to be rubbed with olive oil, and covered with cloths wet with a fresh-made solution of the hydrochlorate of ammonia.

"If there is any general disturbance of the system occasioned by the injury, a glass or two of wine may be taken, or a few drops of ammonia in sugared water occasionally.

"*Malignant pustule*, which might be brought under the head of poisoned wounds, has been already treated of.

"*Burns and scalds.*

"Scalds of the eyebrows and eyelids, in which the texture of the dermis is not injured, are of comparatively small consequence, except in so far as the conjunctiva may be complicated. Slight burns may be also unimportant in their effects, but when the burn is so severe that the dermis is injured, then there is great danger of such contraction taking place, in cicatrization, as to occasion lagophthalmos or ectropium.

"To oppose as much as possible the tendency to contraction during cicatrization, the eyelids must be kept closed, luxuriant granulation encouraged, and cicatrization retarded.

"Another danger of burns, and this is also the principal danger from severe scalds, is, supposing the eyeball to have escaped, anchyloplepharon, when the borders of the eyelids have been rendered raw, and the patient allowed to lie with his eyes closed."

Besides the contents already spoken of, the work before us contains a "Glossary," and a copious index; six pages are devoted to the former, which contains a definition of all the technical terms used in the body of the work. Twenty-three pages are devoted to the index.

The additions by the American editor (who has performed a similar but more laborious task in the work of Mr. Lawrence to the complete satisfaction of the profession,) add much to its practical value.

The typographical execution of the work is excellent. The illustrations have been carefully engraved after the originals, by Gilbert, all of which greatly facilitate the reader in gaining a correct idea of the words of the text. It is with feelings of much satisfaction that we rise from the perusal of the work of Mr. Jones, and we can but wish for it a wide and extended circulation. S. S. P.

ART. XIV.—*New Elements of Operative Surgery.*—By ALF. A. L. M. VELPEAU, Professor, etc.; carefully revised, etc.; with a Treatise on Minor Surgery, illustrated by over two hundred engravings, incorporated with the text; accompanied with an Atlas in quarto, of twenty-two plates, etc. First American, from the last Paris edition.—Translated by P. S. TOWNSEND, M.D., etc.—Augmented by the addition of several hundred pages of entirely new matter, comprising all the latest improvements and discoveries in Surgery, in America and Europe, up to the present time. Under the supervision of, and with notes and observations by, VALENTINE MOTT, M. D., etc.—In 3 vols. Vol. III. pp. 1162, N. York. S. S. & W. Wood, 261 Pearl-street, 1847.

THROUGH the indefatigable and praiseworthy exertions of the able translator, Dr. Townsend, we now have the pleasure of noticing the appearance of the third and last volume (with an Atlas of beautifully-executed Plates), of the great surgical work of Velpeau. As the work has already received two extended notices in our pages, at the hands of one of our contributors, it will be unnecessary to enter upon a full analysis of its remaining contents.

The first chapter of the work is devoted to the subject of *Lymphatic Tumors*, and twenty-five pages are devoted to the discussion of their treatment, under the heads of:—1. *Crushing.* 2. *Setons.* 3. *Extirpation.* The 2d chapter takes up the subject of *Neuromatic Tumors;* this is followed by *Lipomas*, or *Fatty Tumors*, (*Wens*): *Elephantine Tumors; Hematic Tumors; Cysts;* (*Sebacious, Hematic, Serous, Synovial, Osseous, and Cartilaginous*).

Next follow chapters on *Fibrous, Cancerous, and Bony Tumors.*

The remaining portion of the volume is occupied with a consideration of the *Ligature in Mass; Foreign Bodies; Special Operations on:*—1. *The Head.*—2. *Face.*—3. *Diseases of the Mouth.*—4. *Olfactory Apparatus.*—5. *Auditory Apparatus; Operations on the Neck; Air Passages; Alimentary Passages; Chest; Abdomen; Hernia; Organs of Generation* (Male and Female); *Urinary Apparatus* (Calculi); *Diseases of Urethra*, including Catheritism, Contraction of the Urethra, Puncture of the Bladder, Urinary Fistulas; *Diseases of the Rectum.* Lastly, a copious Index to the three volumes. At the conclusion of the volume, we find several pages of interesting remarks from Professor Mott, on *Spina Bifidi* and *Immobility of the Jaw*, characterized with the usual good sense and practical tact of our distinguished countryman.

Did our limits permit, we should be pleased to give a more full account of the contents of the present volume, but as we take it for granted, that the work will speedily find a place in the library of every medical man, who has the slightest ambition to keep pace with the progress of surgical pathology and practice, we deem any extended analysis unnecessary.

Nor have we the slightest disposition to show our critical acumen, by an attempt to find flaws, or point out errors. In a work of such magnitude, it would be strange indeed, if such did not exist; that they are more numerous, or of greater magnitude than may be found in many standard works of a similar kind, we do not believe. We feel too thankful for what has been done, to attempt to pluck a single leaf from the laurels which deservedly crown the brows of the author, translator, and commentator of this great and noble work. They may well afford, in consideration of the present gratitude of the profession, and the posthumous fame which awaits them, to disregard the criticisms of journalists; for if justice be not awarded them in the present generation, they will, at least, receive their full meed of praise at the hands of an impartial posterity.

We need not add, that there is no work in the English, or we believe, any other language, which presents so full and satisfactory an account of the present state of surgical art and science, as that of M. Velpeau, as translated by Townsend, and enlarged by Mott. The additions of the learned and accomplished translator, are extensive and valuable, and the illustrative plates are in the best style of the art. The publishers deserve great praise for their promptness in completing the publication of the work at so early a period, and we trust the profession will respond to such generous outlay and enterprise, by an extensive patronage of the work.

ART. XV.—*The Potato Plant: its Uses and Properties, together with the Cause of the present Malady, the Extension of that Disease to other Plants, the Question of Famine arising therefrom, and the best Means of averting that Calamity.* By ALFRED SMEE, V. R. S., etc. Illustrated with ten Lithographs. New-York: Wiley & Putnam; 12mo., pp. 157.

LIFE, in whatever structure it may be developed, whether animal or vegetable, is the peculiar study of the physician; its accidents, in whatever shape they may appear, constitute his special domain. If the phenomena of life and death, of health and disease, are not investigated by him, they will remain unexplored; if light does not break in upon the darkness which broods over animated being, then may we expect to grovel on, enveloped in doubt and cimmerean shadows.

The death of vegetables, doubtless, may be referred to causes of a similar nature to those which occasion the extinction of animal life. If man is influenced by temperature, light, electricity, barometric pressure, hygrometric state of atmosphere; by food, morbid poisons, pure air, &c., so are vegetables. Both are infested by parasites; both languish and die, in the absence of suitable nutriment; both perish on the application of poisonous agents. These circumstances must be

our apology for calling the attention of our readers to the disease which has of late years infested the *solanum tuberosum*.

The potato disease appeared in Germany in the year 1830. Since then it has spread over various parts of the globe, and still continues to extend its ravages, threatening almost, in some places, the extinction of this valuable bulb. Dr. Smee believes he has traced the disease in question to the depredations of a small insect, which he calls *aphis vastator*, which he says is more than usually prevalent at the present time. A plant, as is well known, may perish from heat, cold, light, darkness, electricity, moisture, dryness, improper soils, &c. Dr. S. attempts to isolate all these causes by showing that, under all variations of their influence, the disease more or less appears; and with respect to fungi, to which the disease has been attributed, he says they do not appear till the plant is damaged.

Dr. S. devotes his first chapter to the physiology of the potato plant, and attempts to show that the integrity of the leaf is essential to the soundness and perfection of the root.

The potato is found to contain about 66 per cent. of water, and 30 of starch; its ultimate elements being, carb. 44, hydrogen 5, nitrogen-oxygen 45, ashes 5. The potato is valuable to man as an article of food from the starch and albumen which it contains, as these two principles can effectually nourish the human being. The one acts by combining with oxygen in his lungs, to give him warmth; the other nourishes his muscular system, and fits him for labor. It is the combination of these two principles which is so valuable, and we find that it cannot be produced at so cheap a rate from any other source. The following numbers express the nutritive equivalents of the articles which are placed opposite :—

Wheat Flour, - -	100	Indian Corn, - -	138
Barley, - - -	138	Peas, - - -	67
Oats, - - -	117	Potatoes, - - -	613
Rye, - - - -	111	do. dried at 212° -	126
Rice, - - - -	177	Artichokes, - -	539
Buckwheat, - -	108	Turnips, - - -	1338

Potatoes also contain a large quantity of phosphorus (2·5 per cent.), which acts as a stimulus to the nervous system. A very good bread may be made of this vegetable, by boiling and reducing to a very fine, tough paste by a rolling-pin, and then mixing with an equal weight of potato starch. The potato is highly efficacious as a remedy for the cure of scrofula. Its starch is used in the arts for various purposes; it is often sold for arrow root; may be converted into dextrine, or British gum, by merely heating it; into sugar by means of sulphuric acid; and into alcohol by distillation.

1. The *Aphis*, to which Dr. Smee attributes the destruction of the potato plant, is about one-tenth of an inch long when full grown, of a white, olive-green, brown, or reddish-brown color. It is generally met with on the under surface of the leaf, usually stationary, and not readily perceived, from being similar in color to that of the leaf itself. The insect is evidently the *Aphis rapæ* of Curtis, which infests the turnip. When it attacks the potato, each leaf is separately destroyed, and the mischief extends to the stalk and root. In many cases the progress of the disease is, at first, from above downwards. "The insect," says our author,

"passes over a field like a blast; it damages the root, lessens the vital power of the plant, and the insect then assumes the winged state and flies away." A microscope is required to examine the animal minutely.

We have not space to go into a full analysis of the work of Dr. Smee; we have, however, been much interested in it; for it contains the results of much careful and original research and observation, and throws much light on the cause of the vegetable disease, which is afflicting whole nations with famine. We cannot say that we are satisfied that the cause is fully made out, although the theory advanced is certainly as plausible and well supported as any we have met with. The work is beautifully illustrated with plates, showing the insect in its different forms and stages, as well as the fungi, and diseased appearance of the potato itself, etc. We commend it as well worthy the attention of the medical man, and the agriculturalist.

ART. XVI.—*A Treatise on the Diseases of the Eye.* By W. LAWRENCE, F. R. S., Surgeon Extraordinary to the Queen; Surgeon to St. Bartholomew's Hospital, and Lecturer on Surgery at that Hospital, etc. etc. A new edition. Edited, with numerous additions, and one hundred and seventy-six illustrations, by ISAAC HAYS, M. D., Surgeon to Wills Hospital, Physician to the Philadelphia Orphan Asylum, Member of the American Philosophical Society, Fellow of the College of Physicians and Surgeons of Philadelphia, etc. etc. Philadelphia: Lea & Blanchard, 1847; 8vo., pp. 859.

THE early call for a new edition of the work by Mr. Lawrence is alone sufficient evidence of the value of the book. It is only within the last few years that the profession in this country have paid much attention to the pathology and therapeutics of the eye. Only a few years ago, and the whole armament that the physician made use of for the treatment of the various diseases of the eye consisted in a few simple astringent "drops," and a "dose of salts." With the more general diffusion of information by the press, the literature of the profession at home and abroad has reached the great mass of practitioners; and this, with the increased facilities offered in all our large cities for the study of pathology and clinical medicine, has, as a necessary consequence, directed the attention of the general practitioner to the study of what heretofore has been considered the specialities of the profession. Of these no one has received so much attention as that of ophthalmic medicine and surgery. Of the works best adapted to the wants of the general practitioner, or those who are devoted to this branch as a speciality, that of Mr. Lawrence, with the numerous additions of the American editor, is allowedly one of, if not the best. "Among the additions which have been made (by the American editor) may be noticed—the descriptions of several affections not treated of in the original; an account of the catoptric examination of the eye, and its employment as a means of diagnosis; one hundred and seventy-six illustrations, some of them from original drawings; and a very full index. Also, in the several chapters on the more important diseases, the results of the editor's experience in regard to their treatment, derived from more than a quarter of a century's devotion to the subject, during

all of which period he has been attached to some public institution for the treatment of diseases of the eye." That these opportunities have been well improved the additions of the editor ably show, as those can testify who have used for a guide, as well as reference, the first edition. The work, however, needs no praise from our hands. We cannot, however, refrain from saying this much, that the library of no medical man can be complete without this work. From it, as from an abundant store-house, the practitioner can draw for supplies or information in times of doubt and need. To Dr. Hays are due our most grateful acknowledgments for the great service he has rendered the profession in this, as in a former edition. We prognosticate that this edition will receive as rapid a sale as the former. S. S. P.

ART. XVII.—*Annals of the Lyceum of Natural History, of New-York*, Nos. 8 and 9, Vol. IV. Stanford and Swords, New-York, 1847.

THE present number is a continuation of Dr. Le Conte's "*Catalogue of the Grodeph Agous Coleopteræ*" of North America. We congratulate the cultivators of entomology on the completion of this able and elaborate monograph, alike honorable to the eminent and indefatigable author, and to the society under whose auspices it now appears. It will take rank at once as a classic in this branch of natural science and will be looked to as the first authority on an obscure and hitherto imperfectly-exposed department. We trust that the publication of the Annals, which has now been so creditably resumed, will be regularly continued, and that the members of the Lyceum will exert themselves to resuscitate and sustain an institution which has done so much for the natural history of our country. We would respectfully suggest to our readers, and especially those residing in the southern and western states, that donations of shells, fossils, minerals, and animals, whether stuffed, or preserved in spirits, will be most thankfully received by the Lyceum, and accredit given for the same, or if desired, other specimens will be returned in exchange. The corresponding members of the society, who are now numerous, and scattered over every part of the United States, might, with very little exertion, furnish not only descriptions of many new objects for publications, but also enrich the collection, by valuable specimens illustrating the various departments of natural science. We shall hereafter present a regular abstract of the proceedings of the Lyceum, drawn up under the supervision of the publishing committee.

PART III.

American Intelligence and Editorial.

THE MEDICAL PROFESSION.—Before the present number of our Journal shall have reached our remote subscribers, the National Convention of Physicians, will have met in Philadelphia, to deliberate upon measures, calculated to elevate the profession, and promote the common interests of its members. We have the utmost confidence, that great good is to result from the deliberations of that assembly; composed, as it will be, of the combined talent and wisdom of the great body of the faculty throughout the United States; and we shall deem ourselves peculiarly fortunate, if circumstances will allow us to participate in its proceedings. We have, from time to time, called the attention of our readers to the importance of the subjects then and there to be discussed; and we have admitted various communications upon our pages bearing on the question of medical education, and medical reform, and the state of the profession in our midst; some of them, perhaps, too denunciatory in their tone, but yet put forth, with the sole intention of elevating and improving it, of placing it, in short, on a par with the other learned professions.

Our next number, which will be the first of a new series of the Journal, will contain the proceedings of the convention, and as full a report of what is said and done, as we can find room for on our pages. With the hope, however, that the present number may be issued previous to the meeting, we present the following communication, from one of the most distinguished professors and practitioners in our country; as it contains suggestions well worthy the attention of the profession, especially of those who are to take part in the deliberations of the convention.

MEDICAL CONVENTION.—My dear Doctor,—I regret very much that it will be out of my power to attend the Medical Convention which is to assemble at Philadelphia in May. It would have given me much pleasure to have met our medical brethren from all parts of this great country, assembled for the purpose of sustaining and elevating our noble profession to that rank and station to which its objects and purposes should entitle it. I rejoice that the profession is at length thoroughly aroused to the necessity of harmony and a closer union among themselves. All seem satisfied that something must be done, or the profession of medicine which should rank as inferior to no other will sink to a system of mere charlatanism. I am unwilling to admit that the profession as a body are less intelligent or worse physicians than they were twenty or thirty years since, or that those entering the profession are less qualified for the faithful discharge of its responsible duties; indeed we know the reverse of this to be the case. And yet it must be admitted that the profession has less of the confidence of the public than formerly, that it has sunk in general estimation, and that quackery and empiricism, both in and out of the profession, was never more rampant than at the present time. However surprising this may at first sight appear, a moment's reflection must satisfy an observer that the cause is obvious. Until within a few years there was at least an apparent line of demarcation between the educated physician and the empiric; true, the quack denounced the regular profession, and the profession denounced the quack; but it was very rare indeed for a man who had been regularly educated in the profession and obtained licence, however much quackery he might practise, to join the empiric in decrying the profession. But Hahnemann, an educated physician, came out and denounced

the profession to which he belonged, and in which he had been educated, as knaves, as fools, and as murderers; his followers imitated his example, and whilst professing to be educated physicians (many of them having obtained licences,) and members of medical societies, they were endorsing, retailing, and repeating all the abuse heaped upon the profession by their master. Others, seeing the success of this course, adopted it in other departments, as in the case of the lectures of Dr. Fitch. Is it surprising that community should lose confidence in a profession so vilified and abused by its own members; and is it not certain that unless something can be done to arrest it, the profession will be irretrievably ruined. The crowded state of the profession, and the difficulty which a young man finds in getting into business, has no doubt contributed in producing this state of things, but we fear there are other causes of a more serious nature; causes which have drawn into the profession more than its due share of the worthless and unprincipled, and which, unless arrested, may make the profession in fact what its worst enemies have charged it with being. It is well known that a medical education when legitimately obtained, is the most expensive of all the professions; but it is nearly as well known that it can be obtained at a comparatively trifling expense. Many students are admitted to our highest institutions without pay. I have been informed of several cases of this kind, where the students were abundantly able to pay, but who under the plea of poverty got their lectures gratuitously. Some institutions advertise that they give credit for lectures, others give credit without advertising. No doubt many honest and worthy young men have availed themselves of this indulgence. No doubt, too, many a worthless and unprincipled person has been thus bribed to enter the profession, because they could get their lectures without pay, never expecting or intending to pay their notes when they gave them. If we look around us it will be found that these are the men who are the first to turn empirics, the first to abuse and vilify a profession to which they should never have been admitted, and who are incapable of appreciating its dignity and usefulness. If we hope for reform, one of the first steps should be to cease to hold out inducements for such members to enter the profession by giving them advantages over the worthy and honest. It is a common observation that we appreciate anything in proportion to what it cost, and it is seldom that a saying becomes a proverb without some foundation in truth. However this may be, it is a well-known fact that no class of citizens have done so much to encourage quackery and break down the medical profession as the clergy. There may be other reasons, but is not the principal one that as a body they are not in the habit of paying for medical services. No man has a higher respect than myself for their vocation, or for the man when he confines himself to and discharges faithfully the duties of that vocation, but for none have I a more sovereign contempt than the clergyman who neglects his vocation to be the pander to, and encourager of, quackery. It would be much better for both parties if they were required to pay like other citizens, and the medical attendant were able and willing to make an equivalent in some other form. The physician would be better appreciated and his services more highly valued. It was my intention to have offered some brief suggestions as to the action of the Convention, but I have been diverted by dwelling on the causes of the present state of the profession. Prof. Dickson has well said that the title of Doctor is no longer of any value, that any person can get it who has credit or money enough to have his name painted on a sign with the title added. The first great step then should be to draw the line of demarcation between those who are of the profession and those who are not. This will be found no easy matter; it will constitute the great struggle, and at first it may appear questionable which party will gain the ascendancy, but if the educated part of the profession, and those who are the friends of law and order, are true to themselves, they would in the end prevail. To accomplish this object, I would suggest the formation of a national association, to be composed of permanent members and delegates from district associations. The district associations to extend over the United States, and if pos-

sible to embrace every regularly-educated physician, who would sustain the dignity of the profession. Let a system of medical ethics be established by the national association, and signed by every member of the general and district associations. A list of all the members of each district association should be published each year in the district, and a copy forwarded to the central or national association. The general association to appoint a committee on ethics, which should be a committee of appeal. Each district association to have a committee on ethics, who should receive all complaints of a violation of the system of ethics, investigate the charges, and if deemed sufficiently important, call an extra meeting of the association to consider them, of which time and place the person complained of should have notice. A majority of votes given at such meeting to expel a member, but the person so expelled to have a right of appeal to the central committee. The names of all persons expelled to be forwarded to the central committee, who should cause to be published once in each year a list of the names of persons so expelled, two or more copies of which should be forwarded to each district association. No person expelled from one association should be admitted into another. The certificate of the secretary of one district association, that the holder is a member in good standing, to entitle him to admission into any other district association.

The subject of medical education will necessarily engage much of the attention of the convention. Much good may be accomplished, but the great danger to be apprehended is, that by attempting too much they will effect nothing. In several of the States the period of study required to obtain a licence to practise or to get a degree is fixed by law; the convention will have no power to alter these requirements, and it may be much doubted whether, if attempted, it would be enforced. All that the boards of censors can legitimately require of the canditate is, that he should have made reasonable proficiency for the time of study which the law requires. We much doubt whether under these circumstances it would be wise in the convention to ATTEMPT, at present, to extend the term of study. The colleges, however, may very properly unite in some additional requirements. No student, as we conceive, should be admitted to an examination for a degree, without a sufficient knowledge of the Greek and Latin languages to understand the meaning of the names and terms derived from those languages, and to translate the recipes found in the pharmacopœia and in works on practice. Every candidate should be required to have attended at least one course of instruction in practical anatomy, having himself dissected. In addition, we believe that every candidate should be required to give satisfactory evidence of having attended the clinical instruction of a hospital for at least six months, or as an equivalent have attended and assisted in the practice and under the instruction of a regular practitioner for at least one year. Much has been said on the subject of the modes of examination and of establishing boards for this purpose independent of the schools engaged in instruction. We must say that we have little confidence in any such expedient. True, this is a matter which each State legislature will regulate for itself. The schools would unquestionably continue to grant their degrees as an evidence of the qualification of their graduates; and with this evidence (whether it confer the power of a licence or not), few students would submit to the trouble and expense of another examination. No one can doubt that the professors who are in daily intercourse with the students, and who are engaged in teaching, are the most competent to examine and the best qualified to judge of their qualifications. Neither can it be doubted that the convenience of the student is consulted by an examination immediately after the close of the lecture term. If, then, the public can be protected against any undue partiality or indulgence, it accomplishes all that could be required. We believe this is fully accomplished by the mode of examination at Geneva and Buffalo. The student is examined in the presence of a board of curators, selected from among the ablest men in the profession, who unite in the recommendation for a degree.

There is another subject which appeals strongly to the convention for some action. I refer to the sale of quack medicine-nostrums or secret remedies. It probably would be in vain to attempt to obtain the passage of laws prohibiting their sale, but much could be accomplished by procuring the passage of a law in each State similar to that of Maine, requiring in all cases of the sale of any compound not found in the pharmacopœia and not prescribed by a regular physician, that it should have legibly printed or written on each parcel the composition of the preparation, in order that people might know what they were taking. The passage of such a law could probably be procured in every State, and would tend much to abate one of the greatest nuisances of the age. C. B. C.

Utica, April 17, 1847.

Encouragement of Quackery by Ministers of the Gospel.—[The following timely and judicious observations by Dr. McPheeters, one of the editors of the St. Louis Medical and Surgical Journal, set forth in so clear a light, the views of the whole profession relating to the encouragement of quackery by ministers of the gospel, that we are constrained to copy them entire; we could wish that they might reach the ears of every minister of the gospel, throughout the length and breadth of our country; that they might see and feel the responsibility they assume, when stepping aside from their holy vocation, they allow their names to appear as ushers to the various nostrums of the day. Nothing has pained us more than this prostitution of their influence. Theirs is the high and holy calling of administering to the wants of the diseased and sin-sick soul; this is the object of their mission proper, then why should they, or by virtue of what right do they, step aside from this their calling, and dictate what is advisable, for the thousand aches and pains that flesh is heir to. We hesitate not to say, that were ministers of the gospel to withhold their names and influence from the various quacks and nostrums that are heralded by day and night in our daily prints, one of the main sources from which they derive their strength and existence, would be cut off; and as a consequence, many valuable lives would be saved, that are now lost through ignorance, and which, we fear will be found at some future day, staining the skirts of clerical garments.—Ed. *ad int.*]

The patronage and encouragement which quackery receives from ministers of the gospel, has often been made the subject of comment, and of severe animadversion, by medical writers; and its continuance is no less a matter of suprise than regret to those engaged in the cultivation of medical science, and in laudable endeavors to ameliorate the condition of suffering humanity, and to prolong the period of human life. That the conduct of ministers, in this respect, is loudly complained of by the profession, is to attributed to the facts —first, that from the nature of their calling, and the position which they occupy in society, they have it in their power, and actually "do us much harm," and science an irreparable injury, by encouraging quackery; second, as they are, generally speaking, men of education, and not unfrequently of science, we have a right to expect better things at their hands; and, third, as ministers and their families are usually attended gratuitously by the faculty, we think it is but reasonable to expect that they will refrain from doing that which is positively injurious to us as individuals, as well as to the profession we practice.—No body of men in our country occupy so enviable a position as do all classes of religious teachers; enjoying, as they do, a prescriptive respect, and being ranked, by common consent, as high as a lady, and above a man. They are looked up to as examples, and their counsel sought, and their advice taken, in secular as well as in ecclesiastical matters, while the sanctity of their calling gives enhanced value to their opinions on whatever subject they are expressed. That such is the case, we rejoice rather than complain, and would not have it otherwise if we could; for no one has a higher regard, or a more profound respect for the persons of ministers, or for the clerical office, than we have; nor has any one better reasons for entertaining such feelings towards them; and we cheerfully admit, that the im-

mense influence which they wield, is, generally speaking, exerted in the most decidedly salutary manner. But we are utterly at a loss to know why it is, that their conduct, in reference to the most humane of all pursuits—one so near akin to their own calling—should prove so noted an exception;—why it is, that, so far as medicine is concerned, they are stumbling blocks in the way of science, and patrons of superstition, error, falsehood and humbug! In the remarks, therefore, which are to follow on this subject, while we shall speak with all that plainness which the importance of the subject demands, we are influenced by no other feelings than a sense of duty and a regard for truth and science.

That we are correct, then, in the position which we have assumed, to wit:—that the hydra-headed monster—quackery—is encouraged, and derives increased strength, from the patronage bestowed on it by ministers of the gospel, we appeal to facts, and to the experience of all men. Scarcely is there to be found a quack nostrum advertised in the newspapers, or whose virtues are proclaimed by pamphlet, or hand-bill—claiming to be a universal panacea—which does not come recommended by a certificate from some one, or more, reverend minister, priest, or religious teacher, testifying as to its virtues, and commending it to all who may be suffering with any disease to which flesh is heir. Or, if in any community there happens to be a practitioner of Homœopathy, Hydropathy, a "faith doctor," or a Mesmerizer, ten chances to one if the first person who employs him is not one of the reverend gentlemen above named, or, it may be, a Right Reverend himself. Such being the case—and it cannot be denied—we ask if we are not right in assuming that ministers are, *par excellence*, patrons of quackery? We do not believe, for a moment, that their object is to retard the progress of rational medicine; but such is the effect of their conduct, and the injury to science is as great, and they as culpable, as though they were actuated by *malice prepense*. Furthermore, we are willing to believe, and do believe that in many cases they are influenced by a desire to benefit others; but they cannot on this account, either, be excused on the score of "good intentions." Paul verily thought that he was doing God's service, when he stood by and consented to the death of Stephen; but was he any the less guilty on that account? No. Nor are they, who, from ignorance, or from any other cause, inflict an injury on science.

Ministers of the gospel, then do more than any other class of men to uphold quackery, and, consequently, to retard rational scientific medicine. Why is this? Is it that they are better qualified than other men to form correct opinions on medical subjects? We assert the contrary; and hold that they are incapable of arriving at a correct conclusion on any subject pertaining to our science. The very nature of their calling, and the course of their studies, preclude the possibility of such a thing. They have no knowledge of Anatomy, or Physiology, without which it is idle to talk of correct notions on medical subjects; and it is worse than presumption in ministers to bring their opinions on such subjects in competition with those of men who have spent long years in their study and investigation; and such conduct is only calculated to diminish, and does diminish, the respect which is otherwise due to them, and to their sacred calling. But it may perhaps be said, in reply to this, "Surely, any one, whether he be a minister or not, can tell whether a particular remedy has done him good in a given disease?" Even this we are disposed to call in question, and are prepared to show that this cannot always be done. Now, how stands the case? A *soi-disant* Solomon, who is too lazy to gain an honest livelihood by the sweat of his brow, resolves on resorting to his wits, and as medical quackery seems to be the most certain and speedy way of arriving at fortune, he determines to go into it. He accordingly throws together a number of drugs, in the shape of a pill, or mixture, and claims for it extraordinary virtues in the cure of certain diseases. He next sets to work and writes letters, lauding his remedy to the skies, and recommending it in the strongest terms to all "the afflicted,"—and to these he appends such names as his fancy may dictate. But this is not sufficient:

in order to complete his designs, and give his nostrum free circulation, he must have the certificate of some one, or more, individuals of acknowledged standing and influence. Such persons are to be found in the clerical profession; and, perhaps, knowing the very great partiality which gentlemen of the cloth have for quackery in general, he waits on the nearest minister, presents him with a box, or bottle, of his nostrum, with the request that he will use it in his own person or family. In some slight indisposition, the remedy is employed, and recovery, as a matter of course, takes place (perhaps convalescence is retarded instead of hastened by its use); but recovery having followed the swallowing of the medicine, it is, of course, attributed to it. The minister is convinced! The cure took place under his own eye; or, it may be in his own person—how can he doubt? He, therefore, cheerfully complies with the wishes of the quack, and furnishes the desired certificate. Now, under such circumstances, how is it possible for him to say, with any degree of certainity, whether nature or the remedy effected the cure? And yet, he testifies that it was the latter, and the nostrum goes forth to the world with the sanction of his name, and with his solemn attestation of its superior virtues—to the encouragement of quackery, to the reproach of science, and, we will add, to the shame of the minister, and to the prostitution of his sacred office. This is no fancy sketch, but a true picture. And this is the kind of evidence on which clerical certificates are usually obtained. Do they reason so in reference to other matters? If so, how pitiable is the condition of those who look up to them for religious instruction, and take their *ipse dixit* for gospel truth.

But let us reverse matters, and put a case in point to our reverend friends (we mean no disrespect), and suppose that an able and ingenious enemy of the Christian religion were to come out with a work on some theological subject, presenting a fair exterior, and purporting to be on the side of virtue and religion, but on every page of which was distilled the subtle poison of infidelity—the more dangerous, because the more adroitly disguised: suppose, farther, that, in order to recommend his work to popular favor, the author were to procure certificates from physicians in all parts of the country, stating that they had examined the work, and could recommend it to all such as were anxious to have their minds enlightened on the important subject of religion, —it cannot be denied that such recommendation would have its influence, and cause the work to enter thousands of families which it would not otherwise reach. If what we have supposed were really to take place, would not every pulpit, from Maine to Mexico, thunder forth with anathemas against the medical profession? They would be charged—and justly charged—with warring against Christianity, and encouraging infidelity. It would be said —and truly said—that, upon a superficial examination of a subject with which they are not at all familiar, they had ventured an opinion to the immediate injury of true religion, but the remote consequences of which no one could foresee. The cases are analagous, and the application obvious.

We have already extended our remarks much further than we at first intended, but we cannot close without saying a few words as to the encouragement which ministers give to the practitioners of the various false systems of medicine—in other words, to quack doctors. The time would fail us if we were to attempt to enumerate all the erroneous systems, pointing out the absurdities of each: we will, therefore, content ourselves, for the present, with a single one—Homœopathy. And in the first place, we would ask the reverend gentlemen who countenance and employ homœopathic practitioners, if they understand homœopathy, and believe in its doctrines? The fact of their employing them presupposes a belief in, if not an understanding of, the system. Now, for the benefit of such, we propose to examine this system for a moment—the great fundamental principal of homœopathy is, that infinitesimal doses of medicine—that is to say, that a grain of medicine so minutely subdivided that numbers fail to express its utter nothingness, will act powerfully on the human system! Another of the principles of this *beautiful and philosophical* system is, that a medicine, when thus minutely subdivided—for example,

a grain of sulphur dissolved in one of our northern lakes; if a small quantity of the solution be collected in a bottle, that its strength can be increased to an indefinite degree by simply shaking the bottle! Hahnemann gives minute directions on this subject, and gravely cautions his followers to be careful lest they give the bottle a shake or two too many, and thereby increase the strength of the medicine to such an extent as to endanger the life of their patient! Now, we wish to know of our reverend friends, patrons of homœopathy, if they do, or can, believe these monstrous absurdities? And, yet, if homœopathy be true, these things are so; and the fact of their encouraging the system implies that they believe them. But is it not absolutely insulting to the understanding of a rational man, to attempt to palm off such stuff on him for truth? He who can believe this, has no mind capable of appreciating correct reasoning, even if we had the patience or the disposition to argue with him.

In bringing our remarks to a close, we have only to say, that, while we fear there is but too much cause for their very general application, we cheerfully admit that there are many honorable exceptions. We know clergymen (and we take pleasure in stating it), who, both by their conduct and teaching discountenance all species of quackery: devout men—men of learning and science, from whose lips we have learned lessons of wisdom and practical piety. To such our remarks are not intended to apply. McP.

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History of Typhoid Fever, as it prevailed near Geneva, N. Y., in the Fall and Winter of 1846–7. By Geo. C. Hay, M. D., of Geneva. (*In a letter to the Editor*).—Dr. Lee,—Dear Sir,—According to your request, I proceed to give you a brief account of the Typhoid fever, which recently prevailed in this region of country, and especially on the opposite shore of the Seneca lake. In that neighbourhood, fevers of a remitting type had prevailed quite extensively during the latter part of the last summer, and during nearly all the fall months, but not a single case, as I can ascertain, died of it at that time. In December, the first cases of the low form of fever showed themselves. All the cases which have occurred seem to be confined to a neighbourhood of from one to two miles square; and beyond the limits of this, as far as I can learn, no cases have appeared. The symptoms in the forming stage differed but little from an attack of ordinary fever, commencing with loss of appetite, sense of lassitude and disinclination to exercise of any kind, chilliness, pains in bones, etc. After twenty-four or forty-eight hours headache came on invariably in all the cases, and in many it was the first symptom, and continued very obstinate through the whole course of the disease. About the third day the patients were generally obliged to take to their beds, the headache increasing, attended with vertigo, dimness of vision, ringing in the ears, suffusion of the conjunctiva and deafness. The tongue was at first covered with a thick white fur which changed by the fourth or fifth day into a brown, and finally into a black during the latter stages of the disease. In a great majority of the cases diarrhœa was a prominent symptom from the commencement, so much so that even the use of the mildest febrifuge medicines was inadmissible; this was controlled with great difficulty by opiates, and in some cases astringents had to be resorted to. Accompanying this diarrhœa, we found considerable tenderness of the abdomen in nearly all the cases. The discharges from the bowels were generally very watery, of a dark color, very fetid, the urine scanty, sometimes entirely suppressed, and of a very red color. The skin was generally quite dry, although not very hot at any time, and in no case could I discover any of the "calor mordax" spoken of by writers, and which I have frequently felt in similar cases. As the disease progressed, in many cases delirium was a constant attendant through the whole course of the fever, and none were entirely free from it. In many cases the collapse came on very suddenly, and in others a gradual sinking came on, and steadily progressed until the patients died. The collapse seemed to bear no relation whatever to the severity of the first stage, as is generally the case, as sometimes in those who had been attacked but

slightly, the collapse was sudden and fatal, while in those whose stage of excitement had been very severe the collapse came on very gradually, and progressed slowly, and *vice versâ*. As to the post-mortem appearances I can give you but little information, as owing to the prejudices existing among the people it was next to impossible to procure an examination. After I had left, however, one examination was made of a boy aged fourteen, who died very suddenly, and I understood from a physician who was present, that his bowels were a complete mass of mortification. As to the treatment, it was very various. All the patients, however, had in the commencement mercury, in some of its forms, and in two cases which have since recovered, it was carried to the extent of slight salivation. Some cases were bled generally, and some not, but it seemed to make but little difference in the continuance or violence of the disease. The local treatment consisted in cold applications, leeches, and blisters to the head and nape of the neck; cups and blisters to the chest, when the symptoms seemed to demand; hot fomentations, poultices, leeches, and blisters to the abdomen, etc. In some cases we ordered the patients to be washed over the whole body with a solution of nitro-muriatic acid made as strong as they could bear it; this was done twice in twenty-four hours, and seemed at least to give considerable temporary relief to the patients. The general treatment was at first calomel, hyd. cum cretâ, or pil. hyd., followed by the liquor ammoniæ acetatis, or spiritus ætheris nitrici, with the potassæ nitras or vinum ipecacuanhæ or antimonii; but in some cases, and indeed in many, their use was impossible, on account of the tendency to diarrhœa, as everything taken into the stomach ran off by the bowels in a short time. In all the cases stimulants and tonics had to be resorted to sooner or later, but generally with little benefit, although at first the patients seemed to rally under their influence, yet they seemed to have no permanent effect in many cases. Those used were the infusum serpentariæ, or columbæ, camphor, ammonia, etc., together with sulphate of quinine, port wine and brandy, with a nourishing diet of beef-tea, chicken-jelly, arrowroot, etc. I forgot to mention that the pulse was in most cases very frequent, from the commencement, ranging from 100 to 130 and 140 during the whole time. In some cases the pulse was quite full and hard in the commencement, but generally it was quite small and very easily compressed. I may say in conclusion that it seemed to matter little what course of treatment was pursued, the patients in a large majority of cases died, some during the first week, others running on four, six, eight, and ten weeks. In one family, five persons died, all between the ages of fourteen and thirty; indeed nearly all the cases have been young persons.

Geneva, February, 1847.

Case of Congenital Fracture of the Os Femur.—[The history of the following interesting case, from our much esteemed friend, Dr. Jacob H. Vanderveer, of Long Branch, N. J., communicated in a private letter, and not intended for publication, we deem of sufficient importance to lay before the readers of the Journal.—Ed. *ad. int.*]

Long Branch, Jan. 25th, 1847.

Dear Doctor,—I have a singular case at present; singular as far as I have any knowledge of. *Jan.* 18. Called in haste to see Mrs. W——. Had been in labor 12 hours. Examination per vag. Found the mouth of womb perfectly dilated; membranous sac ruptured, fœtus presenting the right foot and right iliac region. The left foot or thigh could not be felt. Womb contracting powerfully, and nearly constant. What little intermission I could find in the pains, I directed my efforts in placing the breech in direct unison with the superior strait; this was readily and easily accomplished. It descended slowly, and after a considerable time had elapsed I was enabled to feel the left thigh, which appeared to be bent back and sideways, in a bent-up position, entirely different from the ordinary breech presentation, the womb now acting powerfully. The right foot and leg was soon completely down, the other I had to leave in the position it was, for the womb pressed it so vio-

lently that I considered interference incompatible with safety; it slowly descended, however, and the body was delivered. The head was retained about 20 minutes—the pulsation of the cord had ceased. The child was in a state of asphyxia when delivered, but well-directed efforts soon revived it. I then observed the thigh (which was in the bent position) lay motionless, the child appearing to have no control over it. Upon examination, I found it to be either fractured, or a false joint. The true crepitus, one of the diagnostic marks of fracture, was absent. I could, however, feel distinctly a kind of crepitus, but entirely different from that generally felt in older persons. It imparted to the fingers a squeaking, instead of grating sensation. At last I resolved to set it with splints and bandages, as I would a fracture, let it be that or a false joint. The child was very large, weighing 14 lbs. It appears healthy, and manifests no symptoms of fever or pain.

[In a subsequent letter, dated April 3d, Dr. V. writes me that]—On the 27th of Jan. the inflammation and swelling had increased to a great extent, this I attributed in part to the bandages getting loose, which was very difficult to keep in place in a child so young, owing to its constant motion, and the flexor muscles always predominating, causing the thigh to be constantly flexed or semi-flexed on the abdomen. On the 28th retention of urine occurred, this was soon relieved by warm fomentations to the pubic region, with frictions of camphorated oil, etc. The inflammation was very severe for several days, which however soon subsided under the treatment pursued, which consisted of lead lotions, gentle laxatives, and strict attention to the bandages. The fracture has united much better than I anticipated; in fact you would not observe it, only by close inspection. The child is entirely recovered, and is in a thriving condition.

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Singular Case of Laceration of the Broad Ligaments. By Geo. T. Allen, M.D., Marine, Madison co., Ill.—Mrs. G. T. A., *ætatis* 27, while arranging a window-curtain, Oct. 17, 1843, fell astride a chair, the os coccygis and perineum coming in contact with its top. Mrs. A.'s height was five feet five inches; her shoulders were broad, and she was well-proportioned; consequently her weight could not have been less than one hundred and twenty-five pounds. The distance she fell was about four feet, and the concussion must have been very great.

The immediate effects of the fall were a slight gush of blood from the vagina, and an inclination to faint, which continued for several hours; after its subsidence, she seemed as well as usual, with the exception of pain in the soft parts that had been bruised; these were so much hurt as to prevent any other than a superficial examination, and to induce a full belief that the only injury was external. Mrs. A. sat up the greater part of the two days succeeding the accident, without any other unpleasant feeling than that from the outward injury. While at the tea-table, on the evening of the third day, violent palpitations of the heart commenced; she became faint, and, although immediately placed in the recumbent position, remained so, much of the time, for about six hours; her toes—to use her own words—seemed to die, and this semblance of death extended gradually in a wave two inches wide, from her toes to her feet, ankles, legs, knees, thighs, and body; and in same manner, from her fingers, and her body to her neck, brain, and thence off at the sinciput, occupying, perhaps, five minutes in its transit; immediately returning in the toes, and passing off as before; thus continuing for the space of six hours, succeeded by an interval of six hours, and alternating several consecutive days; each succeeding attack being milder than the preceding, until they ceased to manifest any periodicity, but returned, occasionally, during the first year. Mrs. A. felt at times as if her skin were a bag, filled almost to bursting with animalculæ. Another feeling which persisted through the early part of her illness (three or four months) was a sensation in the stomach similar to that we might expect a patient to suffer if that organ were pounded; this prevented her from lying on either side while it continued, and was succeeded by an aching and burning in the lumbar region, and severe pain in

the os coccygis. The spine became stiff; she could bend it laterally and anteriorly, but not posteriorly, in the slightest degree: some firm substance seemed to cover its anterior surface, in the lumbar region: this feeling continued until relieved by death, and prevented her from resting supinely a moment. At times Mrs. A. suffered much from numbness in her left leg, prolapsus uteri, nervous irritability of her womb, uneasiness and pain in loins —which last symptom commenced two months after her fall, and ended with her life; an unpleasant burning, nervous sensation in the brain, slight derangement of the digestive powers, hepatic torpidity, with proportionate costiveness, acidity of stomach, flatulency, and disturbed sleep. A moderate leucorrhœal discharge was ever present, and prominent symptoms of tympanitis uteri troubled the patient, from October, 1844, until she became *enceinte* in Sept., 1845, and returned, after parturition, in June, 1846. Mrs. A. suffered much from pain in vagina; this organ was diminished in capacity, from swelling of its parietes, and this state, with enlargement of the adjacent parts, prevented the prolapsus uteri from being as prominent as it otherwise would have been. During the period of utero-gestation, Mrs. A. suffered less than before its commencement, and quite as little in parturition, as with either of the three children she had given birth to before the injury. Her fourth child weighed eight pounds and two ounces, and was perfectly formed. Mrs. A. *seemed* as well after confinement as before gestation, until August 22d, 1846, when a slight dysentery commenced; on the 23d she complained of a feeling of distention in her stomach, attributed by her to the presence in that viscus of bile, which secretion she continued to spit up, and declared that she suffered "*agony, dying agony,*" from the extreme distention. These symptoms continued until a few minutes before her death, August 29th.

Post mortem.—The broad ligaments were ruptured, from the fundus to the cervix uteri; the womb lay upon the sacrum, and evidently rolled from side to side of the pelvis, as the patient turned in bed. The vessels in the lacerated part of the broad ligaments resembled a black, vermicular mass. The neck of the bladder, with every part within the pelvis, was much tumefied, and there was considerable engorgement of all the pelvic blood-vessels. The lumbar vertebræ were ulcerated and abraded to the amount of nearly one-half their transverse diameter, and the remaining part had lost its firmness. The posterior part of the inter-vertebral ligaments seemed too thin, and the longitudinal measurement of the lumbar vertebræ, posteriorly, was much diminished by absorption—hence the anterior curvature, and the inability to bend the spine backwards. The periosteum covering the sides of the lumbar vertebræ was of a dark blue color, and so thin as to be easily removed with the finger-nail. *The spinal marrow was perfectly sound.* The irritability of, and feeling of distention in, the stomach, at the climax of the disease, were caused by an excited state of the semi-lunar ganglion and solar plexus.—*Missouri Med. and Surg. Jour.*

Prizes offered by the Lexington Medical Society.—*Prize for the best Thesis.*—The Lexington Medical Society resolved to offer a prize of fifty dollars, or a gold medal or piece of plate of that value, at the option of the successful competitor, for the best Thesis submitted for the Degree of Doctor of Medicine, in the Medical Department of Transylvania University, for the session of 1847–8. Those competing for this prize are at liberty to select the subject of the Thesis.

Annual prize.—The Society also resolved to offer an *annual* prize of fifty dollars, or a gold medal or piece of plate of that value, for the best original essay, on a subject to be selected by a committee. In accordance with the above resolutions, the committee propose, for 1847, a prize *for the best account of Continued Fever*, as it prevails in any of the States out of New England.

Remarks.—The Continued Fever of the Eastern States has been very carefully studied and very fully described. It is found to correspond exactly to the *typhoid fever* of France; and it is by that name that the disease is now generally called. The same disease is known to prevail extensively in some

of the Middle, Western, and South-Western States; but throughout these regions it has not yet been very fully or thoroughly studied. This prize is offered as one means of remedying this defect.

Other things being equal, the prize will be awarded to that essay which contains an authentic and complete account and analysis of the largest number of cases of the disease; its leading phenomena during life, with the lesions in fatal cases; its average and extreme duration; the sex and age, and race, of its subjects; the season of its prevalence; and the prominent points of difference between it and periodical fever. It is very desirable that a careful examination should be made of the mucous membrane of the lower portion of the small intestines. Speculations about the remote and proximate causes of the disease will not add anything to the value of the essays that may be offered. The description of the disease must be sufficiently full and minute, to enable the committee to judge of the accuracy of the diagnosis.

The committee also propose, for 1848, a prize *for the best account of the several forms of Periodical or Malarious Fever in the United States.*

Remarks.—This subject has already attracted so large a share of attention amongst physicians of the South and West, that some of them may be surprised at its being thus brought forward. But, extensively as malarious fever has been written about, there are many points of its natural history which need farther elucidation. Amongst these may be mentioned, particularly, the following:—the comparative liability of the sexes, of the black and white races, and of different periods of life, to the several forms of the disease; the influence of race upon its severity and danger; the relative proportions in different years and localities, of the three principal forms—intermittent, remittent and congestive; the most common type of the pure intermittent form; and the variations in the general character of the disease, in different seasons.

The essays must be sent, post-paid, to the Corresponding Secretary, Prof. J. M. Bush, on or before the first day of January, 1848, for the first, and 1849 for second prize.

Each essay must be accompanied with a sealed address of the author. That of the successful competitor only will be opened. The essays will be considered as the property of the Society, to be deposited in their archives, or published in their transactions, as they may deem best.

The committee may suggest, that a convenient opportunity for forwarding essays from a distance, will be presented by the annual assembling of the pupils of Transylvania University, in the fall.

Lithotomy.—Professor Dudley has recently performed the operation for stone in several instances, and with his usual success. He has now performed the operation on *one hundred and eighty-nine persons*, of whom one hundred and eighty-four have recovered. The last case from which we received particular information, recovered in less than a week. Twelve hours after the operation, the urine passed by the wound for the last time, and union by the first intention took place perfectly.

This remarkable success has not been attained by a *selection* of cases; on the contrary, we have the best authority for the declaration, that he has operated on nearly every case that has been presented. He performs the lateral operation, and always employs the gorget.—*Western Lancet.*

2.

Foreign Medical Intelligence.

ANATOMY AND PHYSIOLOGY.

Malformation of Fœtal Heart.—[Dr. F. H. Ramsbotham lately presented to the London Pathological Society the following interesting account of an infant's heart possessing only one auricle and one ventricle, with the specimen, which we copy from the London *Lancet.*]

It was situated in its natural position in the chest. The auricle was separated from the ventricle by tendinous valves. There was only one artery, the aorta, arising from the ventricle, which sent off a vessel in the situation of the ductus arteriosus. This artery divided into two branches, which supplied the lungs. The venæ cavæ and the two right pulmonary veins entered the auricle in their ordinary positions and directions, the pulmonary veins of the left side forming one common trunk before their termination in the auricle. The vena cava inferior, however, had been destroyed by opening the auricle, and the branch passing from the aorta, which divided into the pulmonary arteries, had unfortunately been cut away in removing the heart from the body.

The child was of full time, well developed, and lived ten days. The late Dr. Combe, who attended it during its short life, stated that cyanosis was perfect over the whole body, but that neither the respiration, temperature, nor muscular action, were materially affected. This preparation is mentioned by Dr. Farre, in his work on the "Malformations of the Human Heart;" and a detailed description of it, accompanied by two figures, is given in the ninety-fifth volume of the *Philosophical Transactions*, at page 228.

A new Ganglion.—Mr. Wharton Jones * has discovered the existence of a minute nervous ganglion, about 1-60th of an inch in diameter, connected by a short pedicle to the largest of the ciliary nerves, in the dog. It is situated at a point nearer to the entrance of the nerve into the eyeball than its origin from the lenticular ganglion. This new ganglion is made up of a small collection of nerve-corpuscles, from among which a few nervous fibrils proceed, and, being collected into a fasciculus, constitute the pedicle by which the body is joined to the ciliary nerve. The discovery affords most satisfactory proof that all which is requisite to constitute a ganglion is a mass of ganglionic corpuscles, and nerve-fibrils proceeding from it. He proposes to name this new body the ganglion cœcum ciliare. In the cat, the only other animal in which Mr. Jones has looked for the ganglion, he found, at the corresponding part of the same ciliary nerve, a small ganglionic mass; which, however, was not connected by a pedicle to the nerve, as in the dog, but closely applied to its surface.—*Ranking's Abstract.*

Vulvo-Vaginal Gland.—M. Huguier † has given a description of a gland situated at each side of the junction of the vulva to the vagina. It was discovered by Gaspard Bartholin, and was generally described by older anatomists; but of late its existence has been almost forgotten. According to M. Huguier, this gland is about the size and form of an apricot-kernel, and

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* Med. Gaz., Nov. 13, 1846.

† Gaz. Med., 4 Avril, 1846.

is provided with an excretory duct, about seven or eight lines in length, the external aperture of which is situated in the angle between the vulva and the border of the hymen. This gland is small until puberty, when it is developed with the other organs of generation; it becomes turgid during sexual excitement, and secretes a quantity of clear mucous-looking fluid, which it is said to ejaculate with some force. M. Huguier agrees with former anatomists in regarding this gland as closely analogous to Cowper's gland in the male subject, for it is situated at about the same part of the perineum as this latter is, and presents the same anatomical relations and connexions. It is an appendage to the vulvo-vaginal cavity, a part which is analogous to the urethra in the male; it receives the materials for its nutrition and its sensation from the same vascular and nervous sources as does Cowper's gland; it presents also many varieties in form, size and situation, and it may be absent on one or both sides, as is often the case with Cowper's gland.—*Ibid.*

Development and Functions of Cells.—In his last report Mr. Paget * expresses strong doubts of the sufficiency of the ordinary theories of cell-development, having been led so to do by recent examinations of tumors and other morbid growths. The structure of such growths seems peculiarly adapted for testing a theory of cell-development: for, as he observes, "they are doubtless obedient to the same general laws of formation as the healthy structures are, and in the unequal and often rapid growth of their several parts, it could hardly happen but that, in many specimens, all the phases would be seen through which their structures pass towards their fully-developed state. But in very numerous examinations I have not found a single example in which a cell has appeared to be forming or formed around a pre-existing nucleus; or one in which fibres have appeared to be formed out of nucleated cells; or one in which nucleated cells have appeared to constitute a stage towards any form of higher development. On the contrary, I have found many instances of rapidly-growing structures, composed of large collections of fibres, without a nucleated cell among or near them; others with abundant nucleated cells, but scarcely any free nuclei or granules, and nothing like a cell incompletely developed round its nucleus; and again, others (and those of especially rapid growth) with no cells at all, but composed almost entirely of corpuscles, like nuclei or cytoblasts.

From these and other observations, I am disposed to think that the ordinary (and not the exceptional) mode of development of fibres is not through nucleated cells, but from a structureless or dimly-granular substance, which is first *marked*, and then broken up into fibres. There is good evidence that the cytoblasts, which are usually or always embedded in this substance, influence the development of the fibres, and though I cannot tell how they do so, yet it is certainly not by conversion of themselves into fibres; they shrivel and disappear as the fibres increase and become more perfectly formed. I think it will be found that, in morbid growths, the nucleated cell is always a terminal, not a transitional form; for in certain tumors in which the best-formed nucleated cells are formed, e. g., the epithelial tumors and some examples of medullary cancer, there are no higher forms found, not even imperfect fibro-cellular tissue, except in small quantity about the blood-vessels. Corpuscles having the characters of nuclei or cytoblasts (to adopt still the usual names) appear to be the really energetic bodies in the growth and determination of these morbid structures; they are found in some tumors so abundantly, and so unmixed with nucleated cells, that their power of multiplying and assimilating cannot be doubted; and it is in some of these tumors also that, apparently under the influence of the cytoblasts, the most perfect fibro-cellular tissue is ultimately formed. What I have seen also of the development of these cytoblasts leads me to agree with that view of the development of nuclei generally, according to which they are described as formed, not on a pre-existent nucleolus, but out of granules collected in a dark or dim

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* Brit. and For. Med. Rev., July, 1846.

mass, of the proper size and shape, which then clears up by the formation of a membranous wall and transparent fluid contents, with, in some cases, one or more persistent granules holding the position of nuclei.

Several other contributions have been made on the subject of the physiology of cells; among which is a long and interesting paper by Dr. Williams;* one by Reichert;† an essay, by Dr. H. Meckel,‡ on the glandular apparatus in some of the lower animals; a short paper, by H. C. Jones,§ on the structure of the salivary glands; and some general remarks on cells, by M. Courtz,‖ in a work on the development of the human ovum. Mr. Jones, in his paper, considers (as Henle did) that the secreting vesicles of the salivary glands exist originally as closed and independent cells, and that they subsequently coalesce with each other, or open at once into a terminal duct of the gland.—*Ibid.*

SURGERY.

Treatment of Aneurism by Compression.—By W. R. Wilde, Esq., Dublin. [An elaborate history of this practice will be found in the "Dublin Quarterly Journal for August, 1846," by Mr. Wilde, the talented editor of that work; in which we find a table of twenty-nine cases—the first by Mr. Todd, in 1820, and the last in the present year, by Mr. O'Ferrall, of Dublin. A tabular arrangement of these cases will be found at p. 263 of this vol. of the Journal. Mr. Wilde ends his paper with the following conclusions:]

1. That numerous attempts have been made, during the present century, to cure external aneurisms, popliteal in particular, by means of pressure upon the artery between the sac and the centre of the circulation; and that various instruments have been contrived to effect this purpose.

2. That by such means it is more than probable that occasional cures were made.

3. That popliteal aneurism seems the most favorable for the application of pressure.

4. That to Mr. Todd is due the merit of having first fairly tried, and successfully applied the pressure treatment of popliteal aneurism in these kingdoms.

5. That no permanent position was established for the treatment of aneurism by compression, until the cases treated by Mr. Hutton, Mr. Cusack, and Dr. Bellingham, were brought before the profession at the Surgical Society of Ireland, in 1843.

6. That up to this period, the instruments made to effect the compression were defective, inasmuch as they applied the pressure on but one point.

7. That the improvement introduced by Dr. Harrison's patient, Hoey, of applying a number of clamps along the course of the artery, has done much to remedy this defect, and has afforded surgeons a very valuable hint on the subject.

8. That from the history of cases recorded by Professor Porter and Mr. Cusack, it would appear that it is not necessary, completely, to arrest the pulsation in the tumor, by pressure on the artery, in order to produce a cure.

9. That this cure is effected by means of a coagulum formed in the sac, either by lessening the current of blood flowing through the artery, or by some peculiar power of coagulation imparted to the blood, aided by the contraction of the sac.

10. That in order to effect this coagulation, galvanism has been employed, and appears to hold out hopes of success.

11. That from dissection we learn, that it is not necessary to obliterate the artery between the point of pressure and the sac, in order to produce this coagulum, and effect a cure.

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* Guy's Hosp. Rep., vol. iv, New Series, 1846.
† Müller's Archiv, Heft ii. and iii., 1846.
‡ Lib. cit., Heft i., 1846.
§ London Med. Gaz., July 10, 1846.
‖ Review in Gaz. Med. de Paris, 18 Avril, 1846.

12. That pressure has been tried, and produced coagulation, even when applied to the distal side of the sac.

Dublin Quarterly Jour. of Med. Science, Aug., 1846, *p.* 131.

[With some of these conclusions Dr. Bellingham is not at all satisfied, especially the seventh, in which it is said that the practice of using clamps, in order to press upon different portions of the artery was introduced by Dr. Harrison's patient, Hoey; whereas Dr. Bellingham claims this important improvement for himself, not being aware at first that a similar method was described by Begin (Dict. de Med. et de Chirurg. Prat.) as having been employed both by Dupuytren, and M. Gama, of Strasbourg. Dr. Bellingham enters into a history of the treatment of aneurism, in a series of papers in the Dublin Medical Press, beginning with the number for Aug. 19, 1846, and in the Medical Press for Nov. 4, describes the different instruments which have been used. As this description may be useful, we subjoin it:]

The Tourniquet Truss.—The compressing instrument, which, under the name of the "tourniquet truss," was employed with success by Mr. Todd and Mr. M'Coy, has been already noticed. It consists of a band nearly similar to that of a hernia truss, except that the spring is stronger, and the pad firmer. The pad is provided with an under plate, connected with the upper by a hinge, and a tourniquet screw passing through it, has the effect, when turned off, of compressing the artery with sufficient force to check its pulsation. This instrument is stated to have been used in one or two other cases where compression succeeded; but its principal use appears to have been to compress the artery at the groin, in cases of amputation near the hip-joint; it is figured by Blasius, as "the inguinal tourniquet of Lafaye;" under this name it is described in some other works, and recommended as well adapted for the purpose.

Mr. L'Estrange's Tourniquet.—In the year 1826, a very ingenious instrument for compressing the artery in the groin, in cases of amputation at the hip-joint, or very high up the limb, where the ordinary tourniquet cannot be applied, was invented by Mr. L'Estrange, of this city. This instrument, which is made of steel, forms three sides of a square, and in each side are sliding joints to allow of their being lengthened or shortened so as to fit any patient. Each extremity is provided with a pad; one of these is laid over the artery in the groin, and by turning a screw connected with it, the vessel is compressed, while counter-pressure is made upon the sacrum by the larger pad at its opposite extremity.

Mr. L'Estrange's tourniquet differs from other compressing instruments adapted to this part of the limb, in the long arm of his instrument (which is in front) passing across the pubes, and pressing upon the artery on the opposite side to that which it encircles; so that, in amputation at the hip-joint, or of the thigh near the trochanters, the artery is compressed without the apparatus being in the way of the operator. This instrument has been employed at some of the Dublin hospitals in amputation, in place of the ordinary tourniquet; it has been also successfully used where secondary hemorrhage followed the operation for popliteal aneurism. Within the last few years, it has been employed in this country for making pressure upon the artery in the groin in some of the cases of aneurism already recorded, in which the treatment by compression is adopted.

Sir P. Crampton's Presse-Artère.—In the year 1830, an instrument for the *immediate* compression of the artery in the groin, was invented by Sir Philip Crampton, which, slightly modified, was employed in several of the earliest cases where mediate compression was successfully used in Dublin. This instrument consists of a hollow splint, well padded, and of sufficient size to receive the nates and upper part of the thigh of the side on which we intend to make pressure, and sufficiently long to reach from the crest of the ilium behind to the middle of the thigh. From the upper and outer edge of the splint, a steel trap passes across to meet another from the lower and inner side; at the point where they meet, the lower is fitted with a slide, and the upper with a hinge; in addition, there is a sliding box, tourniquet screw

and pad, with a sliding-bar to prevent lateral motion. To the upper and inner edge of the splint a spring is attached, which embraces the opposite side of the pelvis, and is continued into a strap which passes over the abdomen, and secures it above, while below it is secured by a soft strap which passes round the thigh. This instrument is adapted to compress the artery as it crosses the horizontal ramus of the pubis. A figure of it has been given by Dr. Fleming, in the Dublin Medical Press, for May 3d, 1843; but it is now seldom used.

The Clamp.—The compressing instrument known at the surgical instrument makers' here, under the name of the clamp, consists of an arc of steel, having at one extremity an oblong padded splint, and at the other, a nut containing a tourniquet screw connected with a smaller pad: the latter, although acted on by the screw, is so connected with it as to be readily turned in any direction. In using this instrument, the pad is laid on the artery, and the vessel is compressed by using the screw, counter-pressure being made by the padded splint at the opposite side of the limb. It is constructed of different sizes, so as to be adapted to compress the femoral artery as it crosses the horizontal ramus of the pubis, or the brachial artery low down in the arm.

The clamp was first used as a compressing instrument in this city by a carpenter, the subject of popliteal aneurism, treated by Mr. Harrison. The pain occasioned by the apparatus originally in use, induced the patient to try if the vessel could be compressed by an instrument called the clamp, or cramp, which is used in his business for temporarily binding portions of wood-work until the glue intended to connect them becomes dry. It answered so well, and gave so little pain, that he continued to employ it in preference to any other, until a cure was effected. The workmanship of the original was, as may be supposed, rude, but it served as the model for those constructed since in this country.

At the London instrument-makers', the clamp has been known under the name of Oke's tourniquet, since the latter end of the year 1843. Mr. Storks, of London, informs me, that the model of this tourniquet (which was intended for the suppression of hemorrhage), was forwarded to Messrs. Weiss by Mr. Oke, of Southampton, in September of that year, and that instruments upon this principle were manufactured soon afterwards.

The clamp, would, however, appear to be a much older invention; if we turn to the description of the instrument employed in the second successful case of popliteal aneurism treated by compression upon record, we shall find that it applies to the clamp now used. The case (which has been already noticed) occurred in the practice of Dubois, and was communicated to the Faculté de Medecine in March, 1810. The instrument (which is stated to have been constructed expressly for the purpose) "consisted of a semicircle of steel, both extremities of which terminated in pads; one was provided with a screw, the other not; the pad with which the screw was connected was laid upon the femoral artery, and, by turning it, the vessel was compressed, the counter-pressure being made by the other pad placed upon the opposite side of the limb." There can be no doubt that Dubois' instrument served as the model for that which bears the name of "Dupuytren's compressor." In Blasius' work, published at Berlin, in 1833, a compressing instrument is figured which very closely resembles the clamp; it is termed a nerve-compressor, and is referred to Moore as the inventor.

The clamp is a cheap and effective instrument, and not the least advantages which it possesses are that its construction is so simple that it is not liable to be put out of order; the principle upon which it acts is so plain as to be readily understood by the patient; and its application can be borne for a longer time, and with less inconvenience, than most other instruments. A figure of the clamp will be found in Mr. Teale's Retrospective Address on Surgery, for the years 1844–45, delivered at the meeting of the Provincial Association, held at Sheffield in July, 1845, and published in the second volume (new series) of their Transactions. (See Retrospect, Part xiii., Art. 119.)

Messrs. Read's Aneurism Compress.—This instrument, constructed by Messrs. Read, surgical-instrument makers, of Parliament-street, in this city, consists of a padded band which encircles the pelvis, and buckles in front, of a semicircle of steel which comes off from the back of this band (into which it is so fitted that it can be adapted to either side), and terminates in a ball and ring, with a screw and pad attached. The ball and ring, through the former of which the screw connected with the pad passes, permits of the latter being pointed in any direction the surgeon may wish; when the pad has been brought immediately over the artery, it is fixed by turning a thumb-screw, which causes the ring to hold firmly the ball within it. Where the ball and ring join the semicircle of steel, there is what is termed "a quadrant," which permits of their being moved either upwards or downwards, so as to vary somewhat the point of pressure, and by turning another screw they are then secured.

This instrument, which is intended for the compression of the artery as it crosses the horizontal ramus of the pubis, or of the femoral artery a little lower down, was used in several of the cases of popliteal aneurism contained in the list already given; it is a considerable improvement upon other instruments, and its application can in general be borne for a longer period than most others, as it compresses the artery in the groin; a clamp may at the same time be applied upon the vessel in the middle or lower third of the thigh. The ball and ring of this instrument have been substituted with advantage by Messrs. Read for the fixed screw in the ordinary clamp.

Signorini's Tourniquet.—The instrument known under the name of the tourniquet or compressor of Signorini of Padua, scarcely differs from Dupuytren's compressor already described. It has the shape of a horse-shoe, and consists of two blades connected together in the centre by means of a screw and rack. Each extremity is provided with a pad; by turning the screw those are brought into close approximation, and the compression effected. This instrument was employed in several of the cases of aneurism treated by compression, reported from the London hospitals, and contained in the list which I have given. A figure of it will be found in Mr. Cox's memoir upon amputation at the hip-joint; it was used to compress the artery in the groin in his operation, and is reported to have answered perfectly.

Charriere's Compressor.—This is an improved instrument upon the principle of Dupuytren's compressor, manufactured by Charriere of Paris. It consists of a semicircle of steel, made in two segments, which slide upon one another, which permits of the size of the arc being increased or diminished, so that the instrument can be adapted to any part of the limb. At each extremity is a joint "en charniere," which supports a pad, that which serves to compress the artery is moveable and is connected with a screw, by turning which pressure is made; a larger pad at the opposite extremity serves to make counter-pressure. This instrument (which has not been used in this country) is figured in the sixth volume of Bourgery's Medecine Operatoire.

The Ring Tourniquet.—This instrument consists of a flexible ring of steel about an inch in width, and of a greater diameter than the limb to which it is to be applied. At one point in its circumference is a screw connected to a pad, exactly opposite is a fixed pad, and by turning a screw these are approximated. When applied, this instrument makes pressure only upon two points—viz., upon the artery, and upon the opposite surface of the limb.

The ring tourniquet is described in few treatises on Surgery, and the name of the inventor has not been mentioned. It was used by the late Mr. Tyrrel in some cases of wound of the brachial artery at the end of the arm, which are reported in the first number of St Thomas' Hospital Reports: the instrument was applied to the artery above the seat of the injury, with a tight bandage from the fingers to the elbow, and in all the cases a cure was effected without the formation of an aneurism. In one instance he had an opportunity of examining the condition of the parts after the patient's death from another disease; he found that the wound in the artery had completely united, and that the calibre of the vessel was perfect. In the last edition of Cooper's

Surgical Dictionary this instrument is also described and Mr. Cooper mentions it as being adapted to cases of compound fracture complicated with hemorrhage, and to wounds of arteries. The ring tourniquet was used in some of the cases of aneurism treated by compression contained in the list already given; it is a light, portable, and convenient instrument, and though inferior to the clamp, might be occasionally substituted for it.

The Weight.—In a case of femoral aneurism already recorded, a method of applying compression was adopted which appears never to have been previously tried, and which I found to check or to diminish the current of blood in the artery leading to the aneurismal sac with but little inconvenience to the patient. This consisted in a metal weight of from seven to nine pounds laid upon a compress or pad, placed upon the artery as it crosses the horizontal ramus of the pubis, the patient lying upon his back with the thigh slightly flexed upon the pelvis. It was resorted to, in the first instance, in consequence of the apparatus in use having gone out of order at a time when it was impossible to have it repaired. A four pound weight laid upon a tourniquet pad, was first tried, but not being found sufficient, a seven pound weight was substituted for it, which answered perfectly; in a second case it required a weight equal to eight or nine pounds to effect the same object; in both the patients preferred it to any instrument. It would therefore appear that the compressing force necessary to check the pulsation of the femoral artery in the groin is about equal to a weight of from seven to nine pounds.

The weight has the advantage over compressing instruments in its checking or diminishing the pulsation in the aneurism with little distress to the patient, as no counter pressure is required, which is often as irksome as the direct pressure. It is not, however, applicable to every artery, the vessel must rest upon a solid substance, against which it can be pressed, as in the lower extremity, where the artery crosses the horizontal ramus of the pubis. The disadvantages which attend this method of applying pressure, are, that the weight is very easily displaced on any change in the patient's position, and its use cannot be continued when he falls asleep, as it requires the assistance of his hands to maintain it in its place. These disadvantages were endeavoured to be remedied by an apparatus invented by Mr. Carte, of this city, which was imperfectly tried in a case of popliteal aneurism under my care some months since, and which I shall now describe.

Mr. Carte's Apparatus for applying the Weight.—This apparatus consists of three parts—viz., a belt of a peculiar shape; a receiver in connection with it; and metal weights of different sizes. The belt which is made of leather lined with chamois, is shaped so as to fit accurately the hip, buttock, and upper part of the thigh; it almost surrounds the limb, and is secured on the outside by straps and buckles, one strap passing round the pelvis; immediately over the artery a circular hole is left in the belt, about an inch or a little more in diameter. The receiver (which is termed a "hopper," from its resemblance to the part in some machine) is made of very strong leather, has the shape of an inverted cone, the small end being attached to the edge of the circular hole in the belt. The weights which are of lead, and of different sizes, have a conical shape, so as to fit easily into the receiver, and are so shaped that the smaller end will pass through the opening in the belt, and rest upon a compress or pad laid upon the artery underneath.

The advantages of this apparatus are, that it is readily applied, and not easily displaced; as the thigh-belt extends over a large surface, and there is no counter-pressure, the patient will suffer little inconvenience, and the amount of pressure can be graduated by having at hand weights of different sizes; its use may be combined with a clamp upon the artery lower down the limb.

Messrs. Read's Apparatus for applying the Weight.—This apparatus consists of a cradle composed of two light flat metal hoops or rings, joined together by a connecting flat piece of iron, into which the upper part of the thigh fits, and the hoops are so constructed that their size can be increased or diminished, as occasion may require. A ball and ring, similar to that of

the "aneurism compress," comes off from the upper hoop, but instead of a screw, a smooth cylindrical iron rod moves in the ball, and is connected with a pad below. The apparatus is intended for the compression of the artery in the groin, which is effected by passing flat leaden weights, having a hole in the centre, down the rod connected with the pad, and their number may be increased until the necessary degree of pressure is made.

Compression by Means of Two Instruments applied upon different Parts of the Limb, and alternately Relaxed.—Notwithstanding the improvements which have taken place in the construction of compressing instruments, and the ingenuity which has been displayed in the invention of new and more perfect forms, it is almost impossible in the majority of cases to adapt any apparatus to a limb, which the patient will bear for many hours consecutively, if the pressure is sufficiently strong to diminish materially the current through the main artery. This object can, however, be attained in another way—viz., by applying two compressing instruments upon separate parts of the limb, one of which is tightened, the other not; and by thus alternating the pressure, we produce the same effect as if constant compression was maintained at one point, and the patient is enabled to keep it up for a much longer period than is possible under other circumstances.

Mr. Millikin's Double-padded Compressor.—An ingeniously-contrived apparatus, intended to supply the advantages to be derived from the use of two separate instruments, was constructed some months since by Mr. Millikin, surgical-instrument maker, of Grafton-street, in this city. It had two separate pads at some distance from one another, each acted on by screws, by which separate portions of the artery could be alternately compressed. This instrument was tried in one of the cases of popliteal aneurism contained in the list which I have given, but I was informed that it did not answer so well as two separate instruments placed upon different parts of the limb.

Braithwaite's Retrospect, from Dublin Med. Press.

Polypus of the Rectum. By Mr. Syme.—Sir A. Cooper states, in his Surgical Lectures, that "in the course of his life," he met with only ten cases of polypus of the rectum.

Some time ago, I met with five cases in the course of a single fortnight—two of them in adults, and three in children—and I have seen a sufficient number of other instances of the disease, to satisfy me that it is not by any means so rare as has generally been supposed. It presents itself in three different forms, of which one usually occurs in childhood, and does not appear much beyond puberty. A gentleman, now established in practice, not far from Edinburgh, when attending my lectures—then I suppose about eighteen or nineteen years of age—applied to me for the removal of a polypus, such as is met with in early life; with this exception, I never met with it beyond the ninth or tenth year. It is extremely soft, vascular, of a florid red color, and assumes the form either of a worm from two to four inches in length, or of a strawberry with a connecting footstalk two or three inches long. This tumor seldom protrudes except when the bowels are evacuated, and then admits of ready replacement, although not without occasional hemorrhage, which may be of considerable amount. The vascularity of this growth, and its attachment above the sphincter, made me averse from removing it by excision; and Sir A. Cooper has mentioned the alarm that was on one occasion excited in his practice by doing so. I have always employed the ligature; and though the soft structure readily gives way when the thread is drawn, bleeding has never occurred in a single instance, or any other symptom in the least degree disagreeable resulting from this mode of removal; I am therefore induced to regard it as the best that can be employed.

The disease appears in adults in two very distinct forms. In one of these, the growth is soft, vascular, prone to bleed, lobulated or shreddy, and malignant-looking, so as on the whole to resemble very much the cauliflower excrescence of the os uteri, but possesses a peduncle or footstalk of firm texture, capable of sound cicatrization after being divided. The profuse, frequent, and protracted

bleeding which proceeds from this sort of growth, renders its removal an object of great consequence; and this may be effected very easily, and with perfect safety, by transfixing the radical cord of connexion with a double ligature, tying the threads so as to include a half of it in each, and then cutting it across a little below the constricted part. In a patient of Mr. Craig of Ratho, (who detected the disease from the great hemorrhage it occasioned,) I could not accomplish protrusion of the tumor, but guided a ligature on my finger, and tied it on the neck within the rectum. It is more satisfactory to force or draw the swelling beyond the sphincter, so that the sound and morbid parts may be distinguished with certainty, and this can usually be done with great facility, although the growth has attained a large size. In a hospital case recommended by Mr. Anderson of Castle-Douglass, I brought into view and removed a tumor not less than an orange, which had a most malignant aspect, and had nearly exhausted the patient by hemorrhage.

In the other form which polypus of the rectum assumes in adults, the tumor is of a firmer consistence, smoother surface, and more regularly spherical or oval form, so as to resemble the growth which in general constitutes *polypus uteri*. The symptoms resulting from this simple swelling are rather annoying than seriously alarming; and the patient, therefore, is apt to delay requiring assistance for a long while. In the case of an old lady, whom I saw with Mr. Hilson of Jedburgh, the tumor was about the size of a cherry, with a long stalk, and we were assured had protruded every time the bowels moved for twenty years. In another case, a gentleman whom I saw with Dr. Johnston of Cumnock, the tumor was nearly as large as an egg, had a cuticular covering, and appeared to have existed for a period equally long. I have always removed these growths in the way that has been already described, and never met with the slightest consequence of a disagreeable kind.—*Lond. and Ed. Month. Jour. of Med. Science.*

Application of Ice in the Treatment of Injuries.—The application of ice to a great proportion of severe wounds, is the established practice of several of the most respected French surgeons.

In the Hôpital St. Louis, burns are treated in this way, and its application in extensive burns appears to us to be that in which its employment is most strongly opposed to our treatment of the same injuries.

"However extensive the surface or the depth of a burn, it is immediately covered with bladders half full of pounded ice, which are fixed by different contrivances, according to the injured part, and this treatment is continued till the separation of the eschars. If the burn is very extensive, the patient is placed in a sheet, and, held by two men, is plunged into a cold bath."—*Annales de Thérapeutique*, May, 1846. It is said that the patient experiences immense relief from this treatment, and that he is comparatively free from pain as long as the body can bear the extreme cold. The bath is repeated frequently. It is believed by the advocates of this treatment that the extent of sloughing of the surface is thus greatly diminished; in other words, that the extent of destruction of the injured parts does not depend on the severity of the original burn, but on the intensity of the reaction, which occurs afterwards, and the beneficial operation of the cold is attributed to its preventing, or in a great measure, subduing this reaction.

However rational the theory, we believe that in practice, this treatment of very extensive burns will invariably be found inapplicable. The surface of the body in these cases is in the first place cold, and the patient collapsed and pulseless, and we do not think the most strenuous advocate of the ice and cold water system would immerse a patient in this state in a cold bath. On the contrary, stimulants must be administered, and the small quantity of caloric remaining in the body is to be preserved by the external application of cotton wadding and other non-conducting substances. It must be remembered, too, that the shock from an extensive burn is not recovered from so rapidly as that occasioned by most other injuries; and frequently soon after the full establishment of reaction, the separation of the sloughs has com-

menced, the extent of which we believe to depend entirely on the severity of the original burn, and not on the treatment employed. The application of ice in smaller burns, we should think much more worthy of trial; indeed, we are aware that great relief is sometimes obtained from its use, and as relief from pain in such cases is one of the best indices of treatment, the feelings of the patient may very properly guide us in its employment.

In the Val de Grâce, M. Baudens uses ice extensively in cases of wounds, contusions, and compound fractures, and apparently with much success; but this surgeon, not content with the degree of cold produced by the ice, reduces the temperature to a much lower degree (15° below zero, C.) by mixing it with common salt. It is allowed, however, that this extreme degree of cold frequently produces considerable pain to the patient, and a feeling of tightness and congestion of the part; and we should naturally expect such an extreme degree of temperature to prove rather a source of irritation to the part, than to act in the beneficial way in which it is represented. By using cold water, and renewing its application very frequently, we probably obtain as low a temperature as it is advisable to apply on most occasions.

We feel assured that the indiscriminate and continued application of ice to wounds and injuries is frequently productive of mischief. We have witnessed fatal erysipelas on several occasions supervene during its application; and in a large hospital in the north of Germany, where this treatment was indiscriminately applied in every case of wound, contusion, and fracture, simple or compound,—fatal cases of phlebitis and erysipelas occurred with greater frequency than we have ever seen elsewhere.—*Ibid.*

Lithotrity.—Statistics by M. Civiale.—From the year 1836 to 1845, M. Civiale has applied his method in two hundred and sixty-six cases, with success in two hundred and fifty-nine patients, a few of which obtained only partial relief. In seventy-nine instances M. Civiale considered that the operation of crushing presented no chance of success, and refused to operate. Lithotomy was performed on twenty-eight, and seventeen recovered.

The statistics laid before the academy, at various periods, show that five hundred and eighty-two patients have been operated upon by the author; and the tables point out distinctly this remarkable fact, that three-fourths of calculous patients who present themselves now-a-days, for treatment, are operated upon by the method of crushing.—*London Med. Times.*

MEDICAL PATHOLOGY AND PRACTICAL MEDICINE.

On the Diseases resulting from the immoderate Use of Tobacco. By Thomas Laycock.—The consequences of smoking tobacco are manifested in the buccal and pharyngeal mucous membrane, and their diverticula; on the stomach, the lungs, and the heart, and on the brain and nervous system. With regard to these consequences, it may be generally stated here that they vary according to the quantity of tobacco smoked, and according to the pathological conditions and peculiarities of the individual himself. Some persons will smoke a very large quantity before certain symptoms arise, while others experience these with a very small quantity. The amount consumed by habitual smokers varies from half an ounce to twelve ounces per week. The usual quantity is from two to three ounces. Inveterate cigar smokers will consume from four to five dozen per week of the lighter kind of cigars, as Manillas, Bengal cheroots, etc.

The first and simplest morbid result of excessive smoking is an inflammatory condition of the mucous membrane of the lip and tongue, and this sometimes ends in a separation of the epithelium. Then the tonsils and pharynx suffer, the mucous membrane becoming dry and congested. If the throat be examined it will be observed to be slightly swollen, with congested veins meandering over the surface, and here and there a streak of mucus. The inflammatory action also extends upwards into the posterior nares, and the

smoker feels from time to time a discharge of mucus from the upper part of the pharynx, in consequence of the secretion from the mucous membrane of the nares collecting within them. Sometimes the anterior nares suffer, but in this case the irritation is not marked by increased secretion so much as by tickling and itching within them. The irritation will also pass to the conjunctiva (and I am inclined to think from the nares, and not by the direct application of smoke to the eye), and the results are, heat, slight redness, lachrymation, and a peculiar spasmodic action of the orbicularis muscle of the eye, experienced, together with intolerance of light, on awaking from sleep in the morning.

I think the frontal sinuses do not escape, for I find that one of the symptoms very constantly experienced after excessive smoking is a heavy dull ache precisely in the region of these sinuses. But, descending along the alimentary canal, we come to the stomach, and here we find the results to be, in extreme cases, the symptoms of gastritis. There is pain and tenderness on pressure of the epigastrium, anorexia, nausea on taking food, and constant sensation of sickliness and desire to expectorate.

The action of the heart and lungs is impaired by the influence of the narcotic on the nervous system, but a morbid state of the larynx, trachea, and lungs, results from the direct action of the smoke. The voice is observed to be rendered hoarser, and with a deeper tone; sometimes a short cough results; and in one case that came under my notice ulceration of the cartilages of the larynx was, I felt quite certain, a consequence of excessive use of tobacco. This individual had originally contracted the habit of smoking when a sailor, and it had become so inveterate that he literally was never without a pipe in his mouth except when eating or sleeping. If he awoke in the night he lighted his pipe; the moment he finished a meal he did the same. It is only in extreme cases like this that the inference can be fairly made as to the morbid results of the habit, because there are so many other causes of disease to be estimated at the same time. This particular instance has, however, during my experience, been corroborated by others of a like kind, and I have come to the conclusion that inflammation and ulceration of the larynx in men are almost exclusively peculiar to the slaves of excessive tobacco-smoking.

Hæmoptoë is another morbid condition distinctly traceable to this habit. The patient experiences a slight tickling low down in the pharynx or trachea, and hawks up rather than coughs up a dark grumous-looking blood. I have not been able to ascertain whence this comes. I have known it to flow out of the patient's mouth during the night, or to be effused shortly after lying down. It is a symptom worthy especial notice, however, because it gives great alarm, and may be readily mistaken for pulmonary hæmoptysis, or an expectoration of blood.

The action of tobacco-smoking on the heart, so far as I have observed, is depressing. The individual who, from some peculiarity of constitution, feels it in this organ rather than elsewhere, usually complains of a peculiar uneasy sensation about the left nipple—a distressing feeling—not amounting to faintness, but allied to it. In such an example no morbid sound can be detected, but the action of the heart is observed to be feeble, and slightly irregular in rhythm; yet not always so in the same person. An uneasy feeling is also experienced in or beneath the pectoral muscles, but oftener, I think, on the right side than on the left.

On the brain the action of tobacco-smoking is sedative. It appears to diminish the rapidity of cerebral action and check the flow of ideas through the mind. This, I think, is a certain result; and it is in consequence of this action that smoking is so habitual with studious men, or men of contemplative minds. The phrases, "a quiet pipe," or a "comfortable cigar," are significant of this sedative action. It differs, however, in kind from that of opium or henbane, because, as a *general* rule, tobacco does not dispose to sleep; it may in *individual* instances, but not generally, with tobacco-smokers. On the contrary, it rather excites to watchfulness, and in this re-

spect is allied to green tea in its action: or, if not to wakefulness, to dreams, which leave no impression on the memory. When this effect has passed off, there appears to be a greater susceptibility in the nervous centres to impressions, as indicated by trembling of the hands, and irritability of temper.

There are a few facts which I would now state generally, and which appear as secondary results of smoking. Constipation and hæmorrhoids are often experienced by inveterate smokers. Acne of the face I have observed to be excited and kept up by the habit, and to disappear with the discontinuance of the latter. Blackness of the teeth and gum-boils are not uncommon results. There is also a sallow paleness of the complexion, an irresoluteness of disposition, a want of life and energy, to be observed occasionally in inveterate smokers, who are content with smoking,—that is to say, who do not drink. I have suspected also that it has induced pulmonary phthisis. It is thought that the sexual energy is impaired by the habit, but on this point I have no facts to detail.—*London Medical Gazette.*

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Erysipelas of New-born Children. By Prof. Trousseau.—This is one of the most dangerous maladies which can affect the new-born child, not only in hospitals but in private practice; it is almost invariably fatal, particularly during the first month of extra-uterine life. Its danger gradually decreases as the child grows older; but still, after the fourth month, about one-half of the infants affected with it sink under its symptoms. The first appearance of this malady is treacherously insignificant; the child has merely lost a little of his good humour; his sleep is slightly diminished, and he sucks rather less than before; at the same time the skin of the pubes is the seat of a small red patch, painful to pressure; the redness gradually gains in extent on the body and limbs, and is occasionally disseminated; but when, in their turn, the foot and hand become affected, they acquire a degree of swelling and redness far greater than that assumed by the eruption in any other region. The genital organs sometimes sphacelate, in consequence of the local inflammation, and in many cases acquire an emphysematous appearance. The pubes is not the only part from which the erysipelas may take its departure; it has been observed to arise from the redness which surrounds the vaccine pustule, less frequently from any accidental laceration of the skin, or from any one of those divisions so common in the inguinal or other cutaneous folds. The general symptoms are interesting in many respects, and amongst others, because their mildness almost inevitably leads the unwary to commit errors of prognosis, which in private practice are neither forgotten nor forgiven. At first the disease appears perfectly local; it is not until several days have elapsed that general uneasiness and crossness show themselves. The color of the skin, the expression of the countenance, often remain for some days perfectly satisfactory, when suddenly an ashy cadaverous paleness is observed, and with that degree of intensity that the child seems to be sinking under copious hemorrhage. The cry becomes incessant, jactitation continual, and loss of sleep absolute. These signs are followed by deep stupor and death; the pulse is at first frequent, and the heat of the skin ceases only during the terminal and fatal stupor. Convulsions, diarrhœa, and vomiting are very seldom met with. When the progress is such as we have described, peritonitis has occurred—a frequent disease in children, and one which has not been hitherto described. The duration of the disease varies considerably, sometimes being frightfully short, at others, on the contrary, being prolonged so far as three weeks.

On *post-mortem* examination the cutaneous alterations are occasionally the only changes observed; but when peritonitis (a frequent complication) has been present, the umbilical vein is often found inflamed and filled with pus as far as the transversal furrow of the liver, and inflammatory secretions are found on the peritoneal surface of the abdominal viscera.

Of the probable cause of the malady we may say this much, that we observe it principally when an ill wind of puerperal fever blows over the lying-in hospitals of Paris. The children seem to have inherited from their mother a

purulent diathesis, and they appear still to be within certain limits subject to the same ailments as the mother, whose constitution has so lately been theirs. The peritonitis of the children may be, therefore, as aptly termed puerperal as that of the mother, because its general cause is to be sought for in the circumstances which have accompanied the last stage of child-bearing and parturition. It is natural that the skin should be the seat of disease, because that surface has been so lately called upon to perform functions as new as they are important; in such children the umbilical cicatrix does not form readily, and is sometimes the occasional, the local cause of the cutaneous disturbance. With regard to the treatment, we have tried almost every local application imaginable, and without success; ointments, lotions, blisters—even the actual cautery—without suspending the progress of the disease. Three cases only have we seen recover during the first month under the use of the ethereal solution of camphor, and of baths containing corrosive sublimate; but in how many have we not since tried the same methods without the slightest benefit!—*London Medical Times.*

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Treatment of Epilepsy.—Dr. Branson communicated to the Sheffield Medical Society, Oct. 29th, 1846, "A numerical Analysis of the Treatment of Forty-two Cases of Epilepsy."

After alluding to the importance of the numerical method of investigating disease, introduced by Louis, he stated that the forty-two cases occurred in 3413 registered cases, being in the proportion of one in eighty-one. Eighteen occurred in males—twenty-four in females, which corresponds with the observations of the French pathologists, but is contrary to the opinion of Drs. Watson and Elliotson, who regard the male sex as more liable to epilepsy than the female:—Under the age of 7 there were 4 males, 2 females; from 7 to 14, 6 males, 2 females; from 14 to 21, 2 males, 6 females; from 21 to 31, 4 males, 10 females; from 31 to 41, 2 males, 2 females; from 41 to 51, 0 males, 2 females.

From this it appears that under puberty the male, afterwards the female sex, is most liable. The predisposition which seems to exist in the female sex between the ages of fourteen and thirty-one may be regarded merely as an indication of the hysterical temperament, the extremes of hysteria and epilepsy being separated by a very narrow line. Of these cases, twenty were centric, and twenty-two eccentric.

Of the eccentric:—6 were connected with amenorrhœa; 7 with intestinal irritation and worms; 2 with undue lactation; 2 with dentition; 1 with menorrhagia; 2 with cessation of the catamenia; 2 with accident—one from a blow on the head inflicted by a schoolmaster, by which the boy was rendered insensible for some weeks, and the other from the breaking of a grinding stone.

One of the cases classed under the head of worms might be called centric, for though the patient parted with a lumbricus teres, the origin of the fit could clearly be traced to fright, from the relation of ghost stories.

Of the eccentric cases:—5 were treated with nitrate of silver; 6 with preparations of steel; 11 with active purgatives, blisters, leeches, turpentine, asafœtida, and vegetable tonics. Of the centric cases:—13 were treated with nitrate of silver; 7 without nitrate of silver; with purgatives, blisters, setons, steel, and valerian.

Of the five eccentric cases treated by nitrate of silver, there were:—cured 1, relieved 1, much relieved 2, not relieved 1.

Of the six treated with steel, there were:—cured 1, relieved 1, much relieved 0, not relieved 4.

Of the eleven treated otherwise, there were:—cured 4, relieved 1, much relieved 0, not relieved 6.

Of the thirteen centric cases treated by nitrate of silver, there were:—cured 0, relieved 4, much relieved 2, not relieved 7.

Of the seven treated by other remedies, there were:—cured 0, relieved 0, much relieved 1, not relieved 6.

The duration of treatment varied from three weeks to seventeen months; the average being about three months. Thus of the eighteen cases of both kinds treated by nitrate of silver, ten derived benefit; whilst of the remaining twenty-four, eight only received benefit, the result being clearly in favour of nitrate of silver as a remedy in epilepsy.

The great objection to the use of this remedy is its well-known property of permanently staining the skin, by a continuance of its use—a property which has been so great an objection in the minds of some eminent physicians, as to almost induce them to discard it, though, at the same time, they acknowledge its efficacy. Dr. Branson had the same fear, until he detected an indication which, he is inclined to think, may prove a valuable safeguard in its administration. The first case in which he observed this indication was that of a man aged 32, who, in consequence of epilepsy long continued, commenced the use of nitrate of silver on the 24th of November, 1843, and continued it until April, 1845. After taking it about three months, he was evidently relieved. In December, 1844, he had been free from fits for eleven weeks, a much longer period than usual. It occurred to Dr. Branson, that the silver, like mercury and lead, might probably show its action on the gums, and on examination he found a dark blue line very similar to that produced by lead, on the edges of both gums close to the teeth. This he pointed out to some of his colleagues, and amongst others, to the late Dr. Favel, who pronounced it to be the effect of lead; but, on examining a case of his own, he found the same line existing. Not then understanding fully this warning indication, Dr. Branson continued the use of the remedy four months longer, at the end of which period he found a very slight duskiness of complexion. In another case in which the complexion had become slightly tinged, there was a well-marked blue line. The line is at first very faint, but gradually assumes a darker tint, and it is well to examine the healthy gum before administering the silver, so as to be able to detect the slightest change of color. It is of a somewhat blacker hue than that from lead, (in Dr. Branson's opinion, having had the opportunity of comparing them), and is not so easily produced as that from lead.

In ten cases which have occurred since, he has found its existence in eight. In two cases it was detected at the end of a fortnight. In four cases it was detected at the end of three, four, six, and seven weeks. In the two in which the line was *not* found, the use of the silver was continued for five months. In two of the cases the line was more strongly marked on the lower than on the upper gum.—*Provincial Med. and Surg. Journal.*

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Tuberculous Abscess in the Pancreas.—The rare occurrence of disease of the pancreas renders the following case interesting. The subject of the case was a young female, aged 25, who had for a considerable time been out of health. Four years ago she had suffered for about two months from severe pain at the lower part of the chest, extending through to the back, which prevented her from lying on her right side or on her back. After the subsidence of this attack she seems to have continued in tolerable health for nearly three years, at the end of which time she became affected with lassitude and debility, uneasiness in the chest and bilious vomiting. The vomiting would sometimes last four or six hours. From this time her skin slowly and gradually became jaundiced, and continued so to the date at which she came under M. Cruveilhier's care, who has recorded the case. She complained at this time chiefly of loss of appetite, and inability to lie on her back in bed unless propped up. Her tongue was moist, and digestion good; but her bowels were obstinately confined, so that she did not require to go to the closet oftener than once in four or five days. The evacuations possessed their natural color. She had some uneasiness on pressure over the epigastrium. The margin of the liver could be felt below the cartilages of the ribs, and appeared slightly enlarged: some pain was caused by pressure over this organ. The urine was not high colored, and formed no precipitate on the addition of nitric acid. She had now very little uneasiness in the chest; no cough, pal-

pitation, or headache. Neither by auscultation nor by percussion could any thing abnormal be detected in the lungs or heart. Some slight remedies were made use of. In about a week she became feverish and generally ill, without any known cause: in the evening of the same day she vomited some bile. The vomiting continued next day, and was accompanied by loss of appetite, and severe pain at the pit of the stomach. The pulse was 100, small and feeble. The vomiting was almost incessant for the two following days, when she became extremely exhausted: the pain in the epigastrium was most severe. No evacuation from the bowels had taken place since the commencement of the attack. Tongue dry, furred, white on the dorsum, red at the tip. Pulse 90, small. She died exhausted the same evening.

The liver was found rather larger than natural; its right lobe firm in texture, and of a peculiar grayish green color throughout. About two ounces of dark green bile were contained in the gall-bladder. The glands in the neighbourhood of the stomach were enlarged, softened, and infiltrated with a blackish matter. Those near the pancreas were also enlarged, and filled with tuberculous matter. The pancreas was about natural in size. Within its last half, or tail, was found an abscess, capable of holding a small hen's egg. It was filled with thick purulent matter, and its cavity was lined by a thick and tough, grayish, organized membrane, within and around which were numerous softened tubercles. External to the abscess the tissue of the pancreas was spread out, and appeared atrophied. The right half of the pancreas was dark colored, but healthy in structure. The pancreatic duct was entire. Two small cretaceous masses of tubercles were found in the spleen, and two similar ones in the apex of the left lung. Traces of recent violent inflammation were found in the stomach, the duodenum, and for a short way down the jejunum.—*London Med. Gaz. from Gaz. des Hôpitaux.*

Diet in Infancy.—Dr. KLENCKE* calls attention to the important deterioration which the milk of stall-fed cows undergoes, and is inclined to attribute the production of scrofula in children in many instances, to its direct transmission through the medium of that fluid. Although the direct production of scrofula by the contagious properties of the milk is assumed rather than proved in this pamphlet, still the fact is very important that stall-fed cows often become tuberculous, and that their milk loses much or even the whole of its sugar, that the butter and casein diminish, while albumen is found, sometimes in as high a proportion as 15 per cent., and elain in the proportion of 1·4 per cent., and that in some cases lactic acid is likewise present.

In a well-written paper on the subject of diet in children, Dr. MAROTTE† draws attention to the error often committed in placing infants on a spare diet, who have been observed not to thrive at the breast, but to suffer from diarrhœa, and to lose flesh. The real means of cure would consist in obtaining a wet-nurse for the child, and thus providing it with a more, instead of a less, nutritious food. Many instances of gastro-intestinal disorder in childhood depend, in his opinion, on the want of a more highly animalized diet. It is, therefore, as a general rule, undesirable to dilute the milk of the herbivora, already poor in animal constituents; while in those cases where it is necessary to supply deficiency in the nutritive qualities of the nurse's milk, chicken or other broth, either alone or mixed with milk, should be used for that purpose.—*West's Report.*

Tubercles in Bones.—Dr. WATTS communicated to the Manchester Pathological Society a case of tubercle in the cancellated structure of the bones, which he illustrated by a series of drawings.

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* Ueber die Ansteckung und Verbreitung der Scrofelkrankheit bei Menschen durch den Genuss der Kuhmilch. Leipzig, 1846, and an abstract of it in J. f. Kinderkr., June, 1846.

† Journal de Médicine, August, 1845; and J. f. Kinderkr, March, 1846.

The patient, a pale-looking, badly-grown, strumous boy, sixteen years of age, who came under treatment for dropsy of the belly and anasarca, died, gradually exhausted with hectic fever. He had no symptom which could have revealed the existence of the disease found on examination after death.

The cavities of the chest and belly contained much serous fluid. The peritoneum was everywhere thickened, lead-colored, and studded over with tubercles. The glands of the mesentery were enlarged and tuberculous. There was an immense abscess, containing four pints of curdy pus, situated on each side and in front of the spine, which was here denuded of periosteum. The kidneys were enlarged and pale. The testes were small, and had not passed out of the abdomen. Very little tubercle obtained in the lungs, merely a few gray granulations. There was a cicatrix on the inner aspect of the left shoulder, where an abscess had opened two years previously, which, after discharging matter for some time, healed. The boy had not lately complained of pain in this part. On opening the joint, pus escaped; the articulating surface of the humerus was rough from being denuded of its usual smooth covering. The section exposed to view a most perfect specimen of yellow tubercles in the cancellated structure of the head and neck of the bone. The cancellated substance was deeply congested with blood, intensely red, and slightly, perhaps, softer than in its healthiest condition; in the midst of the red cancellæ were seen the straw-colored tubercles, with irregular-shaped but clearly-defined margins. Similar tubercles were also found in the diseased lumbar vertebræ.

These tubercles presented essentially the same microscopical appearance as yellow pulmonary tubercle. They consisted of remarkably well-developed tubercle concretions and granular matters, in which were seen here and there a few oil-globules, and everywhere innumerable gaseous bubbles of the most minute size, like mere points, probably the product of chemical changes.

The concretions were perfect specimens of their kind, and withal more plump than those usually met with in the tubercle of lung. Magnified 800 diameters, they resembled fragments of gum-arabic, slightly softened in water. They were faintly yellow, and so far transparent that, on mixing a portion of the tubercle in water, the outlines of the concretions deeper in the streams could be seen through those swimming above them.

Dr. Watts remarked, that the formation of tubercle in the bones had been doubted by many, and it is only a few years ago that the question was satisfactorily determined in the affirmative. The French and German pathologists first established the truth of its existence, but published no account of its microscopical appearances. The present case is therefore the more interesting as it further confirms the fact by the evidence exposed by the microscope.

Respecting the manner in which tubercles form in the osseous structures, he was inclined to think there would be found a series of cases, the present serving as the type, in which the morbid product is deposited in portions of cancellated structure already in a state of disease, analogous in some of its prominent features to inflammation, though differing therefrom in other particulars. The cancellated structure becomes, in these instances, deeply congested with blood, its nutrition is disturbed, it apparently has some tendency to softening, and a badly-vitalized germ, in physical properties resembling coagulable lymph, is exuded into spots, and forms into tubercle, all of which may happen without the excess of heat, or manifestation of pain, usually attending inflammation. Yet this should not be regarded as any objection to the possible formation of these tubercles in another series of cases, in complication or coincidently with the most unmistakable phenomena of the inflammatory process.—*London Med. Gaz.*

On the Fallacies attending Physical Diagnosis in Diseases of the Chest. By Thomas Addison, M. D.—[As Dr. Addison justly remarks in his introduction to the following communication, there is no one thing which has been more prejudicial to the study of auscultation than the overweening impor-

tance and assumption of infallibility attached to it by some of its ill-judged advocates. Great as the assistance undoubtedly is which it affords as an adjunct to the investigation of the rational signs of disease, it is indisputable that even in the hands of a proficient the stethoscope will often lead to mistakes in diagnosis if it be exclusively relied upon, to the neglect of the information to be derived from other sources. To strip the stethoscope of the extravagant and meretricious pretensions thrust upon it by judicious friends, to make a candid acknowledgment of the manifold difficulties to be encountered in its employment, is Dr. Addison's aim, and although we are of the number of those who look upon a knowledge of auscultation as indispensable to make not only an accomplished, but even mediocre physician, we are glad of the opportunity of laying before our readers so clear and candid a statement of the fallacies to which it is occasionally subservient. The author has adopted the method of enunciating certain propositions, the principal of which are thus exhibited :]

1. It is well known that many persons while under examination, entirely fail to perform the respiratory act efficiently, either from nervousness, or from mistaking the manner of accomplishing it. This may lead to an erroneous belief that the respiratory murmur is deficient, or even absent, while the lungs are perfectly healthy.

This source of fallacy is avoided by desiring the patient to cough, and to inspire deeply, so as to cough a second time. This done on both sides of the chest, the actual state of either lung may be ascertained with tolerable precision.

2. Whatever lessens the freedom, mobility, or elasticity of the ribs, renders the sound on percussion more dull. Hence it is that in rickety persons, where deformity of the chest has taken place subsequent to birth, the signs furnished by percussion are often extremely unsatisfactory ; and, indeed, under such circumstances, neither percussion, nor in many instances auscultation, can be much relied upon.

3. Some persons with actual deformity have naturally such fixedness of the ribs, that they at all times manifest very imperfect resonance, as well as considerable feebleness of the respiratory murmur.

4. The rigidity of the cartilages of the ribs in advanced life has a similar effect; and, moreover, often tends to throw obscurity over hypertrophy of the heart by preventing the usual heaving of the ribs at each systole of the hypertrophied organ.

5. When exploring the chest in a case of recent disease, we may be misled by the permanent effect of an ancient pleurisy.

[The physical signs of old pleuritic contraction independent of deformity palpable to the senses, are stated to be, "dulness on percussion, feebleness or absence of the respiratory murmur, constrained movements of the ribs, dry crepitation, and harsh sonorous râle during inspiration." The value of these signs is much increased by their incompatibility with the recent history of the case.]

6. When, as usually happens, rickety deformity of the chest consists in lateral flattening of the ribs, with projection of the sternum, the action of the heart is liable to beat with such violence, and over so diffused a space, as to lead to the unfounded apprehension of organic disease of the organ.

7. The dulness on percussion caused by pushing up of the diaphragm by an enlarged liver, or fluid in the peritoneum, is liable to be mistaken for dulness caused by fluid in the pleura.

8. Bronchitis is a frequent source of fallacy, it may greatly obscure pneumonia, phthisis, and pleurisy, as well as other chronic diseases of the organs.

9. When the bronchitic complication of phthisis is considerable we often fail to detect some or all of the physical signs of the latter, such as dulness on percussion, tubular respiration, and even bronchophony and pectoriloquy. This is more especially the case in the earlier stages.

[It is under these circumstances, Dr. Addison observes, that the too exclusive stethoscopist is liable to be beaten in diagnosis by those who altogether

reject physical examination, but the former will obviously have the advantage if he institutes, likewise, a careful inquiry into the history of the patient, and the rational signs of his disease. According to Dr. Addison, the individual symptom which, above all others, should lead to the apprehension of tubercular disease, is occasional slight hæmoptysis just sufficient to tinge the sputa.]

10. Dulness of sound on percussion, tubular respiration, bronchophony, pectoriloquy, and gurgling, are not necessarily conclusive of phthisis. All these signs may result from changes induced by a former pleurisy, from pleuropneumonia, or whooping-cough, [? Ed.] or even from recent pneumonia or pleurisy associated with considerable bronchitis.

[Cases are given in illustration of this proposition.]

11. When, in phthisis, the larynx is so involved as to impede the entrance of air and give rise to permanent sonorous râle in the tube, the reverberation of this râle through the entire chest is apt to lead to the erroneous suspicion of disease in the lungs.

12. Complete loss of voice from disease of the larynx almost completely nullifies the results of auscultation.

13. The existence of a cavity may be overlooked if the bronchial tubes leading into it are plugged with mucus.

In every case of suspected phthisis the patient should be made to breathe and cough with violence; this will dislodge mucosities and render the existence of a cavity perceptible.

14. A patient may have all the rational signs of incipient phthisis while auscultation does not reveal any change in the lungs.

Similar symptoms may arise from relaxed uvula, and in hysteria.

15. Dilated bronchial tubes surrounded by indurated pulmonary tissue, cannot be distinguished from phthisical lesion by auscultation alone, especially if situated in the apices of the lungs.

In such cases the diagnosis is chiefly formed by the history of the case.

16. Malignant disease of the lungs cannot be distinguished from other lesions by auscultation alone.

17. If acute pneumonia have proceeded to complete hepatization when we first examine the patient, the physical signs are frequently insufficient to distinguish it from tubercular consolidation, or ancient pulmonic induration. This is especially the case if the apex of the lung be the seat of the induration.

18. Pneumonia may occur without cough, and so closely resemble simple continued fever that both the stethoscopist and the non-stethoscopist are apt to be deceived.

In such a case the stethoscopist has infinitely the advantage, and will rarely fail to detect pneumonia by the physical signs.

19. When the anterior and inferior portion of the left lung is consolidated by pneumonia, it may not be detected by percussion on account of the proximity of a flatulent stomach. Under similar circumstances a marked amphoric respiration is produced, with metallic tinkling, leading to the erroneous conclusion that pneumo-thorax is present.

The respiration acquires its amphoric character by reverberating through the solid parts to the inflated stomach or bowels.

20. It cannot be determined by physical examination whether pneumonia have or have not supervened upon tubercles, although the prognosis in the two cases would be very different.

21. I doubt whether physical examination can in any instance determine, with certainty, the existence of simple tubercles in the lungs.

22. When serous effusion is very considerable, giving rise to unequivocal bronchophony, tubular respiration, and want of resonance and vocal vibration, physical examination has repeatedly led to a mistaken belief that these signs resulted from pneumonic or other consolidation of the lung.

23. When a patient presents himself with febrile affection of any kind, we may, on examination, detect dulness on percussion, tubular respiration, bron-

chophony, and a râle not distinguishable from the submucous crepitation commonly observed in pneumonic hepatization; and yet physical examination should not enable us to determine whether the chest affection be recent or of ancient date. When a portion of lung has been compressed by pleuritic effusion, and has been prevented from expanding again by adhesions, the physical signs may remain permanently, and be found to resemble precisely those which result from recent pleuro-pneumonia.

24. Experience leads me to the conclusion that pleuritic friction-sound cannot in all cases be distinguished from the rubbing produced between the inflamed peritoneal surfaces of the liver and diaphragm; neither can the croaking sounds produced in the bronchi be always distinguished from the pleuritic rub.

25. As simple pericarditis is rarely attended with pain, and as the other symptoms of that disease are equivocal, the physical signs are chiefly to be relied upon in forming a diagnosis. Nevertheless, when effusion has taken place to a certain amount the friction-sound commonly disappears, and auscultation fails to recognize the disease.

26. Enormous accumulations of fluid in the pericardium cannot always be distinguished from effusion into the cavity of the pleura.

27. When the pericardial friction-sound is single auscultation may fail to distinguish it from a valvular murmur, especially if it be situated over the region of the valves.

28. The double pericardial friction-sound may be confounded with the see-saw murmur of imperfect aortic valves, and vice versa.

This question may be almost decided by the characters of the pulse alone.

29. A sound closely resembling a murmur appears sometimes to be produced by the stroke of the heart against a portion of lung interposed between it and the parietes of the chest. Under such circumstances auscultation may lead to the erroneous conclusion that the heart is diseased.

This sound is most commonly heard at some point at the edge of the left lung, and resembles the *bruit de rape*. It may occasionally be made to disappear by a deep sustained inspiration. The author thinks it may be identical with the sound described by Dr. Latham as present in phthisis.

30. Auscultation fails to distinguish an aortic murmur depending on organic change from one which results from other causes; neither can it decide whether what has been called a mitral murmur is organic or functional.

31. In certain diseases of the heart it is difficult or impossible to localize the murmurs with accuracy, however pronounced they may be.

32. Auscultation cannot distinguish the murmur of an aneurismal artery from the murmur produced by external pressure upon the vessel.

33. Physical examination does not enable us to distinguish congenital malformation from disease of the heart or large vessels.—*Ranking's Abstract.*

Table of Urinary Deposits.—By Ray Charles Golding.

Lithates.

1. Urine, white, yellow, red, or pink.
2. Of acid re-action.
3. Clarified by heat.
4. Is soluble in alkalies.
5. Dissolves in nitric acid with effervescence.
6. Solution in alkalies precipitated by acids.

Phosphates.

1. Urine feebly acid, neutral, or alkaline, when tested with litmus paper.
2. Is soluble in weak acids.
3. Deposits unaffected by heat.
4. Deposit of phospate of lime, amorphous; urine of high specific gravity, unaffected by caustic potash.
5. Deposit of mixed or fusible phosphates; urine of low specific gravity, easily becoming putrid.
6. Triple phosphates: deposite crystalline, and soluble in acetic acid.

Oxalate of lime.

1. Urine mostly neutral, sometimes fully acid, or alkaline; specific gravity about 1020.
2. Is transparent, of a pale citron or greenish hue, and free from sediments.
3. Insoluble in acetic acid and in warm dilute nitric acid.
4. Oxalic acid set free by boiling with sulphuric acid. (?)
5. Alkaline efflorescence of carbonate of lime before the blowpipe, reddening moistened turmeric paper, if sufficient deposit can be collected: carbonic acid and carbonic oxide gases being at the same time evolved.

Cystic oxide.

1. Urine greenish-yellow, and as the phosphates generally co-exist with the cystine, it has a peculiarly fetid smell.
2. Is deficient in urea and lithic acid; specific gravity about 1020 or 1022.
3. Is rare in man, but prevalent in the canine and feline races.
4. Soluble in acids, fixed alkalies, and their carbonates.
5. Insoluble in alcohol, water, carbonate of ammonia, and nearly so in acetic acid.
6. Will not combine with the acetic, tartaric, or citric acids.
7. Soluble in caustic ammonia, but re-precipitated by acetic acid.

Sugar (Grape).

1. Saccharine urine peculiar to man.
2. Urine clear and green, unless the lithates or phosphates are accidently present.
3. Average specific gravity 1040; but may range from 1025 to 1055.
4. Has a sweet taste, a vapid odor, and readily ferments.
5. Trommer's test (Berlin, 1841): sulphate of protoxide of copper and liquor potassæ; a brown sub-oxide of copper is precipitated on boiling.
6. Growth of Torula (ovoid) at 70° F., and vinous fermentation with yeast at 80° F. (Christison).
7. Ronge's sulphuric acid test: carbon deposited.
8. Rich brown when boiled with an equal weight of caustic potash (Moore).
9. Hunefield's chromic acid test: bistre-brown color produced by exposure to bright solar light.

Albumen.

1. Specific gravity 1024, 1020, 1013, or lower.
2. Coagulated by heat and nitric acid, if no redundancy of lithates or phosphates exist.
3. If coagulum fragile is indicative of a chylous origin, and as such coagulates spontaneously, and contains blood discs.
4. Deposit of lithates equally well produced by nitric or muriatic acid: not so albumen.
5. Lithates dissolved by a gentle heat (about 70° F.); albumen coagulated at 157° F.

Pus.

1. Forms a greenish-yellow pulverulent deposit, closely resembling the phosphates, which becomes mucoid and tenacious on the addition of caustic potash.—(Babington.)
2. Pus-globules and sometimes oil-globules seen under the microscope.
3. Urine supernatant on the purulent deposit usually clear.
4. Renders urine acid, with no tendency to become alkaline.

Mucus.

1. Urine muddy and alkaline, does not contain oil-globules.
2. Urine contains phosphate of lime and triple phosphates in abundance.

Bile.

1. Coloring matter insoluble in water.
2. Stains linen permanently reddish-brown.
3. Precipitated green by muriatic acid.

4. Nitric acid produces a greenish tinge, soon passing to red, blue, violet, and pink.
5. Soluble in caustic potash.

Xanthic Oxide.

1. Urine very similar in appearance and reaction, to lithic urine.
2. Yellow hue produced by nitric acid, and a reddish one by caustic potash.

Urea.

1. Urine of high specific gravity.
2. Crystal of nitrate of urea, produced by the addition of nitric acid to the urine and exposed to cold.

Blood.

1. Blood discs seen under the microscrope.
2. If much blood be present the urine will be albuminous.
3. A light red color sometimes produced on the addition of common salt to bloody urine.—*London Medical Gazette.*

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Urinary Deposits, with their Characteristics and Tests. By W. Proctor, Esq., York.

I.—Colored.

(A.)—*Crystalline*, which is *uric acid*, characterized by having the rhombic form, or that of square tables; soluble in nitric acid by heat in effervescence, which, on evaporation, leaves a beautiful pink deposit (mureid of Liebig), becoming purple on the addition of ammonia; soluble in a boiling solution of potassa, from which hydrochloric acid precipitates it as a white gelatinous substance, speedily becoming crystalline. Before the blowpipe blackens and dissipates with a peculiar animal odour.

(B.)—*Amorphous*, which may be

1. Pink, red, or yellow *urate of ammonia:* is soluble in hot water, and again deposited on cooling; soluble in boiling solution of carbonate of potassa; boiled with solution of potassa, evolves ammonia; has all the characters of uric acid with nitric acid. Before the blowpipe comports itself as uric acid, except that it gives out ammonia and decrepitates strongly.

2. Red or brown blood.—Urine becomes opaque by heat or nitric acid.—Microscope detects the blood-discs, which often subside, and form a distinct layer at the bottom of the vessel; chloride of sodium, and other neutral salts, heighten the color.

3. Green or brown bile.—If, from the brown coloring matter (biliphocin), on addition of nitric acid, the urine becomes blue, then green, afterwards violet and red, and lastly assumes a yellow or yellowish-brown color; if in small quantity, the intermediate colors are not observed; hydrochloric acid changes the urine to green. If from bilin, this may be detected by Pettinkofer's test.

II.—Colorless.

(A.)—*Crystalline*, which may be

1. *Oxalate of lime.*—Octohedral or quadrilateral crystals; insoluble in acetic acid, soluble in nitric and hydrochloric acids; boiling with carbonate of potash; forms soluble oxalate of potash and insoluble carbonate of lime; the former gives characteristic reactions with chloride of calcium, sulphate of copper, and nitrate of silver. Before blowpipe becomes carbonate of lime; on continuing the heat, lime only is left, giving out heat on the addition of water, and browning turmeric paper.

2. *Phosphate of ammonia and magnesia* (triple phosphate), right rectangular or trilateral crystals; soluble in diluted mineral and acetic acids, from which, by an addition of ammonia precipitated in a crystalline form; soluble in boiling solution of potassa, with evolution of ammonia. Before the blowpipe gives off ammonia, and runs into a white enamel, addition of phosphate of lime imparts ready fusibility.

3. *Cystine* in simple or compound tables; insoluble in boiling water, soluble in ammonia (with odor of sweet briar) and alkalies, and precipitated by

acetic acid; insoluble in alcohol, tartaric and oxalic acids, and bicarbonate of ammonia.

(B.)—*Amorphous* may be

1. *Phosphate of lime.*—Readily soluble in dilute hydrochloric and nitric acids, sparingly in acetic; precipitated by ammonia in an amorphous condition, forming, when collected on a filter, a horny mass; oxalate of ammonia in these solutions gives a white precipitate. Before the blowpipe, first black and then white, leaving an ash, which is neutral.

2. *Urate of ammonia.*—Characters as above. (Colored B.)

Pus.—The microscope detects pus-globules. The urine coagulates more or less by heat; soluble in solution of potassa, forming a tenacious glairy fluid.

Mucus.—Insoluble in potassa; imparts little or no albumen to the urine, therefore slight or no coagulability by heat, etc.

Pettinkofer's test.—Add to the urine, by drops, two-thirds of its volume of sulphuric acid, keeping the mixture below 144°; add a few drops of a solution of cane sugar (one to five of water), and shake the mixture, when, if bilin be present, a violet-red color will be developed.—*London Lancet.*

On the Use of Stimulants in Fever. By Dr. Corrigan, of Dublin.—Let us, as we stand at the bed-side of a patient in typhus fever, recollect that in looking at the extent of the maculæ, or for the presence of petechiæ, or examining the distended vessels of the conjunctivæ, we are looking not at a mere local derangement, but that we are studying in these external indications the state generally of the circulatory system as a whole. In this view we can understand why we attach importance to the color of the maculæ; why we look upon rose-colored maculæ as a good sign, and dark-colored maculæ as indications of danger.

The dark-colored maculæ are indications of danger, because their color is owing, we know, to an enfeebled circulation. The feebler it is, the darker will be the color of the maculæ; while the more energetic is the capillary circulation, the more vivid will be the color of the blood passing through it. In this view we can also find an explanation of the fact, that a patient may have an intellect not disturbed, may have cool skin, a clean tongue, a soft abdomen, a pulse not above 70 or 80, with volition and sensibility perfect—and yet die of typhus fever in seven or eight days. Of what does the patient die in such a case? He dies of this lesion of the function of circulation. In most cases this lesion is not the only one present, although often the most prominent; but I wish to fix attention on it in this, that I may call an analytic view of fever, as it leads to practical rules for the administration of one of our most important agents in the treatment of fever, viz.: wine. You are too often bewildered in the directions as to its employment. You are told to beware of delirium in its administration, and yet again you read that delirium subsides under its use. You read instructions either to refrain from its use when the tongue is dry, or to judge of the propriety of continuing its exhibition by its effects on the tongue. Instead of attempting to reconcile all the contradictory statements, and too often inexplicable advices, that are laid down for you, turn from the books to the living book—the patient—and read from him. Ask yourself what is it in typhus fever you prescribe wine for? Is it for delirium? No. Is it to prevent its approach? Again, no. Do you give it for a dry tongue? Certainly not. What is it that, as you consider a patient's state, would lead you to think of its employment?—is it not the state of the function of circulation, taken as a whole, indexed to you by the pulse, on one hand, and by the state of the capillary system of circulation in the skin, on the other.

It is for this you give it. It is the specific remedy directed to remedy the general lesion of the function of circulation, and hence in its administration you may give it, and you must give it, whether there is or whether there is not delirium; for delirium may be present or absent in a case requiring its exhibition for the function of circulation. You should give it indifferently,

whether the tongue is moist or dry, for the tongue may be either, and yet wine may be required; and hence the tongue becoming moist is not an indication that you may dispense with its use; nor its continuing dry, a sign to make you discontinue it. You may give it with a soft abdomen, or with an abdomen tympanitic, for similar reasons. You are giving wine, recollect, as the specific remedy for the lesion of the function of circulation (remember, always comprising under this the capillary and cardiac circulation); and by the change in the circulation, and by this alone, you are to judge of the necessity of continuing, decreasing, or augmenting its dose. Under its exhibition you will see the vessels of the conjunctiva contract, the maculæ, become rose-colored, and the patches of skin in the face, and on dependent portions of the body, lose their dark livid hue. Keep this, then, in mind, the lesion in fever for which you give wine, is the lesion of circulation, and if this function, from debility, require it, you must give it under all circumstances of derangement of other functions. Of the quantity required, it is quite impossible to lay down any rule. No two cases will have exactly the same amount of depression of circulatory energy; no two cases will require precisely the same amount of wine. In some cases, four to six ounces are enough for a few days, in continuance, to restore the circulation to sufficient tone; in other cases it requires as much as one ounce of wine every hour, or 24 ounces in 24 hours; and even in addition to this, as much as eight ounces of brandy; and all this barely sufficient to preserve the circulation from sinking.

We must never abandon a case of fever, as long as there is life; we must remember what the post mortem of the case of Rodmond tells us, that in its present form there is no structural disease; that the patient, even in the dying moment, is sinking from a mere lesion of function, and that even then recovery is not hopeless; and we must recollect what clinical observation of several cases even now under our own observation in the hospital tells us, that the patient, one day, in a state seemingly moribund, may on next day, or within twenty-four hours, be out of danger. It will not unfrequently happen, that even the power of swallowing is lost for several hours; that a small portion of brandy or wine can only be got down by raising the patient in bed, throwing spoonfuls of brandy into the pharynx, and then holding up the patient's head until it descends to the stomach, apparently almost by its gravity. Even thus it sometimes cannot be passed along to the stomach, but even then we can stimulate the circulating system by injections; and in some cases which you have seen, I am confident the preservation of life has been owing to ether, given in the form of injection every two hours, in quantities of two drachms, until, under its stimulating effect, the circulation gained some vigor, and the power of swallowing returned.

With the same object in stimulating the capillary circulation, blisters are applied in succession over the surface. The nurse is supplied with four or six blisters; one after another is applied, with intervals of six hours between them, over chest, abdomen, thighs, and legs. They are thus applied, not as counter-irritants, not to act as derivatives on internal structural disease, but as stimulants to excite the capillary system. An action produced in any part of it, will be conveyed through the whole, and thus their action on the skin coincides with and assists the action of the internal stimulus of wine, ammonia and brandy.—*Dublin Hospital Gazette.*

MIDWIFERY AND DISEASES OF FEMALES.

On the Constitution and Functions of the Cervix Uteri. By M. Negrier.—The following are the most important conclusions which M. N. draws from his investigations. The superior orifice of the cervix endeavours to contract powerfully the instant that the dilating body, whether the ovum or the fœtal head, has passed out of it; the superior orifice alone may oppose an obstacle to delivery, it alone may incarcerate the placenta, whereas the inferior orifice,

when it has been fully and slowly dilated, returns to its ordinary size after a considerable time, and gradually. In females who are delivered for the first time, the orifices of the cervix contract before the walls of its cavity; and in women who have been delivered more than once, the lips of the external orifice close more slowly than the cavity of the cervix; and in all women the parietes of the cervix are thrown into folds from above downwards. These perpendicular folds result from the closure of the superior orifice, and are not entirely effaced even ten days after delivery. In cervical implantation of the placenta, M. N. seems to prefer plugging far before any other mode of treatment.—*Med. Examiner, from Arch. Gen. de Med.*

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Fœtus, with left Arm partly amputated by the Funis coiled round it. (Dub. Quart. Jour. of Med. Scien., Nov., 1846.)—Dr. Beatty exhibited to the Pathological Society of Dublin, a preparation of a fœtus, of between the fifth and sixth months of utero-gestation, which he adduced in confirmation of the fact several years ago described by Dr. Montgomery, the spontaneous amputation of the limbs before birth. This specimen illustrates that process, and may help to explain why the fœtus is so often found maimed before it arrives at its full period. The left arm in this instance had been enveloped in a coil of the umbilical cord, which had so tightly constricted it as to cause the absorption of all the tissues with which it was in contact; this had occurred about the middle of the humerus, and, the soft parts being removed, only the bone preserved the continuity of the limb.—*Southern Jour. Med. and Phar.*

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Hysteria.—The following conclusions respecting the pathology and treatment of hysteria appear in a memoir offered by M. Gendrin (Aschives Gén., Sept., 1846), to the Académie de Médicine:

1st. Hysteria is not universally characterized by convulsive paroxysms: it is a *continuous* malady, the symptoms of which are always to be recognised during the interval between the paroxysms, as well as in the fit.

2d. In all cases of hysteria, without exception, a general or partial anæsthesia exists. In the slighter degrees, the anæsthesia occupies only particular parts of the integuments; in the more aggravated forms the whole integument is implicated, as are also such portions of the mucous membranes as are amenable to examination.

3d. There is no accordance between the degree of anæsthesia and the severity of the hysteric paroxysm.

4th. The greater number of patients experience over a limited part of the body a degree of hyperæsthesia which is in many cases the immediate cause of the fit.

5th. Paralysis is a frequent hysterical symptom, and may be prolonged for an indefinite time. This paralysis is the source of many serious errors in diagnosis.

6th. It is a mistake to consider the sensation of a ball in the throat as a constant accompaniment of hysteria.

7th. All the marvels related of late days as the production of animal magnetism are witnessed in spontaneous hysteria: so the insensibility which will allow a painful operation to be performed may be seen in hysteria.

8th. Of all medicinal agents there are none which is so efficacious as opium in large doses.—*Ranking's Abstract.*

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Application of Ether Vapor to the Practice of Midwifery.—Professor Simpson has employed ether vapor in the practice of midwifery, and is the first, we believe, who has made the application of this agent. The case was perfectly successful, as the following extract will show:

"A few days ago, Professor Simpson stated to his class that he had practised with entire success the inhalation of sulphuric ether in a case of the most difficult form of labor, and where otherwise the sufferings of the patient would undoubtedly have been extreme. The mother was lame and deformed. At a former accouchement, the labor lasted three or four days, and, from the

necessarily protracted use of instruments, the patient's agonies were very great. On the present occasion, Dr. Simpson had previously determined to avoid, if possible, the use of all instruments, and to attempt to extract the infant by the feet. He expected to be aided in this by the use of the ether inhalation. Accordingly, when labor had set in for a few hours, the patient was put under the influence of ether, and in a few minutes the child was turned and extracted, while the mother was altogether unconscious of the operation, and that, too, although the delivery was rendered excessively difficult, by the degree of compression to which the child's head required to be subjected. On afterwards awakening, or passing from her 'etheralized' condition to the state of common consciousness, one of the first circumstances of which the patient became aware, was the noise attendant on preparing a bath to resuscitate the infant. A remarkable circumstance pointed out in the case by Dr. Simpson was, that whilst breathing the ether, the labor pains or throes continued, and yet the mother (to speak paradoxically) felt no pains. We hear she is rapidly recovering. This is, we believe, the first instance in which this new and extraordinary agent has been employed in the practice of midwifery."—*London Med. Gazette.*

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Wound of the Gravid Uterus—premature delivery—peritonitis—recovery.—The subject of this case was a peasant woman to whom Dr. Czajewski was called on the 20th July, 1845. The patient was 27 years of age, of habitually good health, advanced five months and a half in her pregnancy, was chasing a cow with a pitchfork, which she held by the forked extremity. The handle of the instrument accidently became fixed in the ground, and the woman, carried on by the rapidity of her movement, fell on the pitchfork, which penetrated deeply into the abdomen. Through both wounds a green and yellowish fluid escaped in intermittent streams, but the patient preserved sufficient strength to walk to her home, distant 500 metres (about one-third of a mile). During the following two days she remained in bed, and on the morning of the 20th of July was delivered by Dr. C. of a still-born child. On the body of the fœtus a wound several milimetres in depth was observed on the lower angle of the left scapula. The placenta was also perforated in the vicinity of its circumference. Some symptoms of peritoneal inflammation having been observed, leeches were applied twice, and mercurial ointment was rubbed over the surface of the abdomen, the wounds of which healed at once. One of them burst open eighteen days after the accident, and yielded passage to six ounces of fetid pus, and afterwards to fecal matter. This orifice was seated at one inch from the symphysis pubis, at four from the umbilicus and rather to the right side. Its extent was a little more than one inch. The fistula was cauterized several times, and was completely obliterated within the space of five months.—*Am. Jour. Med. Science, from Journal de. Chirurgie.*

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On the Treatment of After-Pains. By Edward Rigby, M.D., Senior Physician to the General Lying-in Hospital, &c. &c.—We find these pains after most labors, but they vary much, both in duration and severity. They are always most severe in women who have borne many children, and in some multiparæ they continue from 24 hours to three days. These pains, in common with those of labor, depend on contraction of the uterus; and these contractions are kept up after labor, by the presence of the lochia, or of coagula of blood, or of shreds of membrane in the cavity of the uterus. The after-pains, therefore, you will easily understand, are essential to the due emptying of this organ. After-pains are not usually felt in primiparæ. In multiparæ, when the woman is quite healthy, they seldom continue very long. When very severe, and of very long continuance, they may be considered as indicating the presence of inflammation, or, at all events, of a state bordering on inflammation. The pain no longer comes and goes in distinct intermissions, but it gradually becomes constant; the uterus, too, becomes tender on pressure, and the other symptoms of inflammation are established; but we shall

have to consider this subject hereafter, when speaking of puerperal fever. It must, however, be borne in mind, that long-continued and severe after-pains may form an insidious transition to a state of inflammation.

The treatment pursued during the last few days of pregnancy has great influence in modifying the after-pains. If the woman be allowed to go, even up to the period of her labor, with her bowels confined and loaded with unhealthy fæces, and with the secretions of the primæ viæ disordered, the uterus seldom contracts well during labor, and, under these circumstances, after-pains are sometimes very severe. The too rapid expulsion of the placenta, and the hasty conclusion of the last stage of labor, so that the uterus does not contract fully and firmly, are also causes of the contractions which cause these after-pains; and, in these cases, the after-pains are useful in expelling the clots and lochia, which, if allowed to remain, would become putrid, and thus prove a source of irritation, and, perhaps, give rise to puerperal fever. When the practitioner neglects to apply the child to the breast as soon as labor is concluded, the uterus does not contract fully, as before mentioned; this, therefore, is another reason for early sucking. In speaking of the application of the child to the breast, it was omitted to mention the fact of nurses having a saying, that "the child brings after-pains." This occurs, to a great extent, when the infant is not applied to the breast, until the third day, and is, therefore, another reason, if more were required, for its early application.

Although after-pains are commonly, no doubt, excited by the presence of coagula in the cavity of the uterus, still they may sometimes occur when no such coagula are to be found. On this subject Dr. Burton, of York, who published in 1751, has given some curious observations, which explain one cause of after-pains very satisfactorily. Dr. Burton says: "upon the expulsion of the child and the placenta, the orifices of the uterine sinuses must contract, and thus retain the grumous blood which is in them; hence the use and benefit of these after-pains, which by stimulating and compressing the vessels and muscular fibres, make them exert their force to squeeze out this grumous blood, which otherwise might remain there, and occasion inflammation, suppuration, &c., from all which we find that these after-pains are necessary towards removing or preventing an inflammation of the womb; therefore, we must not be too forward in giving strong opiates, and other internal medicines, which may take them off whilst this grumous blood is lodged within those sinuses. I doubt not," continues Dr. Burton, "that those patients who die from the eighth to the fourteenth day, whose uterus has been inflamed with the symptoms above mentioned, have been injured by the too free use of opiates." The discharge, in these cases, contains little vermiform shreds, and these shreds do not consist of portions of membrane which have been left behind, but they are the casts or moulds, as it were, of the cavities of the blood-vessels, and are composed of their contents coagulated. Dr. Burton mentions a case to which he was called, in consequence of severe after-pains coming on some time after labor; in this case, having introduced his hand with some difficulty, he perceived several small membraneous strings, as he then thought them, adhering to the uterus; but, he says, "I was soon undeceived, for, upon expanding my fingers, by which I stretched the womb a little, several of these came into my hand, which I drew out, and found what I had imagined to be membranes to be only oblong grumous blood, resembling fibres, like those that adhere to a spatula after stirring arterial blood in a basin for some time. I introduced my hand a second time," he continues, "and made the experiment again, but found none of these little clots within the cavity of the womb; yet, upon expanding my hand, several came out of the orifices again, which I could plainly perceive, and, after keeping my hand there a little while, I brought away all that were in the cavity of the uterus, and the patient's complaints immediately abated, and she recovered well from that moment." These little vermiform fibres are, therefore, the casts of the blood-vessels, the contents of which had coagulated, having been retained by the contraction of their orifices. By being careful not to hasten the last stage of labor, so as to give the uterus time to contract slowly, the uterine sinuses

expel their contents, and the annoyance of after-pains is, in many cases, altogether prevented.

It was formerly the practice always to administer a large dose of laudanum, to check these after-pains; and a most pernicious practice it was, but which happily has diminished considerably of late years. As much as forty minims of tincture of opium were administered as a rule in all cases by some accoucheurs. It is hardly necessary to point out the falsity of the reasoning on which this practice was founded. Opiates should never be given for the purpose of checking after-pains, unless they are very severe, or in some peculiar cases which will be hereafter considered. Should the patient, however, have been accustomed to an after-pain draught, as it is called, and seem to expect it, a little tincture or extract of hyosciamus or of lettuce may be given her. A mild sedative may, however, in many cases be useful after labor, as when the system is in a state of irritability and restlessness, consequent on the fatigue and irritation of a lengthened period of suffering; but in these cases a small dose of Dover's powder, or of the sedative solution of opium, will always prove sufficient. When after-pains continue very severe for some time after labor, the best plan of treatment will be to give the customary dose of castor oil a little earlier than usual; this will generally relieve the pains, on bringing away a quantity of fæcal matter. When the pains continue very severe, in spite of this treatment, the presence of inflammatory action may be suspected, and the treatment must be accordingly.—*Medical Times.*

MATERIA MEDICA AND PHARMACY.

On the Use of Alum in Cases of Habitual Constipation. By Dr. John Aldridge.—The author observes that the disease described by Dr. Marshall Hall under the name of mimosis acutus most frequently occurs between the ages of thirty and fifty, although occasionally it happens much earlier. It may attack every variety of temperament, but is most liable to present itself in persons of sedentary habits. Women are more subject to it than men. The individuals who labour under it, are usually of a dusky complexion, or, more exactly speaking, the skin always presents a dirty appearance. The face is frequently coated with a greasy-looking perspiration. The breath is foul, the gums spongy, and apt to bleed; the tongue broad, flat, flabby, indented at the margins by the presence of the teeth, and coated with mucopurulent exudation.(?) The bowels are usually constipated; yet the patient may tell you he has daily alvine evacuations, and yet the colon may be in a state of distention from fecal accumulation. The abdomen is swollen, and feels unequal to the hand, the course of the ascending and transverse colon being more resisting than the other parts to pressure; in these situations there is also sometimes tenderness, and even pain. Besides the foregoing symptoms, the patient almost constantly complains of headache; says he is very nervous, subject to tremors and sudden flushings of heat upon excitement, as well as palpitation of the heart, and epigastric throbbings.

Dr. Marshall Hall recommends active purgatives in the treatment of this disease. For a considerable time the author followed his advice, but found cause to be dissatisfied with the results. The patients, for a short period, expressed themselves relieved; but day after day the necessity for cathartics became more urgent, and the relief obtained became gradually less marked. He therefore commenced to inquire whether there was any other remedy likely to be more persistent in its benefit, and *alum* presented itself to his mind as a medicine fitted for controlling the pathological condition upon which he believed the disease to depend. Looking on mimosis acutus as a disease essentially consisting in a semi-paralytic state of the ganglionic nervous system, its analogy to colica pictonum seemed very evident; and, in connection with this analogy, the medicine that was found useful in the one disease would naturally present itself as being likely to prove beneficial in the other. Accordingly, he was led to administer alum in comparatively large doses, in cases of habitual costiveness accompanied by the symptoms described above,

and found its use to be followed by advantages which could not be hoped for from the use of ordinary purgatives. He considers moderate doses of this medicine to be very useful, not only in restoring the healthy tone of the large intestines, enabling them to expel their contents, and rendering the continual use of purgatives unnecessary, but also in affording a universal firmness and strength to the system; it diminishes anormal and debilitating secretions, while it increases the renal. When alum is given in doses of a ℈j. or ʒss. without being conjoined with any purgative, in mimosis acutus, it produces large and very solid evacuations. For private practice the following formulæ may be employed:—

℞. Infusi Rosarum, ℥viij.; Sulphatis Magnesiæ, ℥j.; Aluminis, ʒij. M. Sumat cochlearia duo ampla cum aquæ cyathis vinariis duobus, primo mane, quotidie.

℞. Infusi Rosarum, ℥viiss.; Aluminis, ʒij.; Tr. Cardam. Comp. ℥ss. M. St. cochlearia ampla duo, ter dies.

Dublin Hospital Gazette.

*** The modus operandi of the alum in the above cases is probably precisely the same as that of the large doses of sulphate of zinc which were recommended a few years since in similar instances, a plan of treatment which we have ourselves employed with advantage.—*London Med. Gaz.*

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Mode of giving Mercury to Children.—By Sir B. Brodie, Bart.—[Sir Benjamin considers inunction especially applicable in giving mercury to children. He uses the ointment as follows:]

I have provided a flannel roller, on one end of which I have spead some mercurial ointment—say a drachm, or more; and I have applied the roller, thus prepared, not very tight, round the knee; repeating the application daily. The motions of the child produce the necessary friction; and the cuticle being thin, the mercury easily enters the system. This causes neither griping nor purging; in a child it does not even in general cause soreness of gums, but it cures the disease. Very few of those children ultimately recover in whom the mercury has been given internally; but I have not seen a single case in which this other method of treatment has failed.

[We cannot say too much in favour of this mode of administering mercury to children. Since Sir B. Brodie's recommendation of inunction in adults (see Retrospect, vol. ix. p. 154), we have repeatedly tried its effects in children, knowing how very unsatisfactory was its exhibition by the mouth, when the system was required to be affected. We cannot but suspect that its failure in cases of acute hydrocephalus, in children, is often owing to its powerless effects when given by the mouth.

In a case which lately occurred in our practice, its effects seemed to be very evident and surprising. It was one in which some of the most urgent and fatal symptoms were present; such as very dilated pupils, constant convulsions, hemiplegia, and more or less stertorous breathing; in short, so violent were the symptoms, that we considered the case perfectly hopeless; but on reflecting on Sir Benjamin's method, we ordered the strong mercurial ointment to be smeared on each leg, every twelve hours, and covered with a stocking made to tie lightly above the knees. The symptoms soon began to abate, and by following this up with small doses of the iodide of potass, frequently repeated (gr. j., every three or four hours), the head symptoms vanished.

In a second case, the same set of symptoms were approaching, but were stopped by the same mode of treatment. We would, therefore, recommend our medical brethren to attend more to *mercurial inunction* in diseases of children.]—*Braithwaite's Retrospect, from British & Foreign Med. Review.*

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Observations on Colchicum. By M. Donovan, Esq.—[Mr. Donovan thinks the drying of the bulb interferes with its powers. Dr. A. T. Thompson says, "The acrimony on which its virtue depends, is partially dissipated by drying and long keeping, and completely destroyed by any heat above 212°." The

acetous extract, also, must be in a great measure destroyed, unless a steam-bath be employed. The vinum colchici of the three British pharmacopœias, is made from the dried bulbs, and therefore must be of inferior efficacy.]

I believe the most efficacious preparation of the bulb is the wine produced from it in its recent and undried state, as recommended by the late Sir Everard Home, who published three papers on it in the Philosophical Transactions for 1816 and 1817. In these papers he has given an account of its preparation, and of its effects therapeutic and physiological. He directs two pounds of the recent bulbs, undried, to be macerated with twenty-four ounces of sherry wine in a gentle heat for six days.

He convinced himself, by repeated trials, that this vinum colchici operates in every respect like the eau medicinale in removing the pains of gout. In his own case the symptoms disappeared in six hours after taking the remedy; but with other persons they did not go off for twelve hours, or even twenty-four. He found that, like the eau medicinale, it diminished the frequency of the pulse 10 or 20 beats in a minute, in twelve hours after taking the dose; and this he considers the criterion by which we may ascertain that the constitution is under its influence.

With regard to the modus operandi of colchicum, he conceives that it produces its effects on the circulation, and not on the stomach. This he ascertained in the following manner. Thirty drops of colchicum wine were injected into the circulation, through the jugular vein of a dog. The pulse increased 40 beats in a minute, and intermitted: in seven hours he had a motion, and was well. In another experiment, the same dog got a double dose by the jugular, which produced much languor; but he recovered. He says, that the effects on the dog were the same as on himself. In a violent fit of gout, he took sixty drops of eau medicinale, which he considers the same as wine of colchicum. He soon became hot and thirsty; in three hours the pain was much diminished; in seven hours nausea came on; his pulse, which was naturally 80, fell to 60, and intermitted; and he became languid; but next day he was quite recovered.

In another experiment Sir E. Home injected 160 drops of colchicum wine into the jugular of a dog; the animal instantly lost all power of voluntary motion; the breathing became slow; and the pulse was scarcely to be felt. In two hours the pulse rose from 80 to 150. In five hours after he became very languid, and the pulse was very weak; he vomited some bloody mucus and died. The stomach and duodenum were found in a high state of inflammation. These facts Sir E. Home conceives to prove that the effects are exerted on the circulation, and not on the stomach, in the same way as every poison is known first to enter the circulation, before it specifically affects particular parts.

At the suggestion of Sir E. Home, these experiments on dogs were repeated, with eau medicinale in place of colchicum, by Mr. Gatcombe, and the results were nearly the same; which is a still further evidence of the identity of these two medicines. The colchicum bulb, Sir E. Home says, contains both extractive and mucilage, both of which, wine, in the first instance, takes up; but when the liquor is strained and allowed to stand, a considerable deposit is almost immediately separated. This deposit he found to be not only active but virulent; six grains of it given to a dog, by the mouth, produced vomiting and purging which continued for twenty-four hours, the latter evacuations of both kinds being tinged with blood.

Coinciding with the supposed identity of the eau medicinale, which also lets fall a deposit, Sir E. Home concludes, from some experiments, that this remedy, when it contains the deposit suspended in it, produces double the irritation on the stomach and intestines that the clear vinum colchici does. He found that in an instance where he took a dose of eau medicinale, without having shaken the bottle, it was mild in its effects; but that the other half, which contained the deposit, when swallowed, on a different occasion, was very severe.

When the deposit is separated from wine of colchicum, he found that

it by no means becomes inert. On the contrary the filtered wine cured a person, on whom it was tried, of a fit of the gout, as well as if it had been in it. These facts are of great importance, and require to be attended to in the use of this medicine; for we can separate the vomiting and purging portion from that portion which only exerts a specific action on the gout, by removing the deposit from the eau medicinale or colchicum wine, according to the conditions of the patient's case; and this is more necessary in the use of the eau medicinale, as its violence has in some cases proved fatal. The sale of eau medicinale was some years since prohibited in France on account of a nefarious use to which it had been applied. The deposit is, most probably, as Sir E. Home and Mr. Brande suppose, a substance analogous to the deposit which settles from the juice of the wild cucumber named elaterium. This once separated, the juice becomes, like the filtered colchicum wine, mild in its operations.

Sir Joseph Banks, convinced by the evidence contained in these papers of Sir Everard Home, that the vinum colchici, from which the deposit has been removed, must be a less hurtful medicine than the eau medicinale, thought it a duty to himself and the public to make trial of it. When the gout in his left hand and in the joints on that side of the body was very severe, he allowed Sir Everard Home to give him ninety drops of the vinum colchici, and found that the symptoms of gout were sooner and more completely removed than they had ever been by the eau medicinale of which he had experience during seven years, having taken it regularly, and kept a regular account of the doses, their effects, and the intervals between them.

When the variable strength of the different preparations of colchicum, arising from age, climate, soil, season, and manipulation, is considered, it becomes a question whether it might not be better to reject them all, and to introduce exclusively into the materia medica the active principle of the plant. Indeed, this idea has been already acted on in Italy. Professor Quadri recommends the employment of a proximate principle discovered by him in colchicum, which he calls colchicina, and which he found most useful in gout, and less inconvenient than the bulb. The production of known effects from a known dose would thus be as certainly insured as in the case of any other medicine. Another advantage would be, that, inasmuch as the antarthritic powers of the bulb cannot be always brought to bear on the disease, on account of the veratria, which Pelletier and Caventou proved it to contain, we could then increase the dose without any second source of apprehension.

Colchicina possesses great energy. MM. Gregier and Hesse administered one-tenth of a grain to a cat, eight weeks old, which killed the animal in twelve hours, after varied and excessive suffering. The stomach and intestines were found violently inflamed. Until this change is made, the best preparation of the bulb is undoubtedly Sir Everard Home's wine, made from the fresh bulb, dug at the end of July, sliced thin, and the slices, as fast as cut, instantly thrown into the wine. It is a common practice with physicians, in this country, to direct wine of the seeds of colchicum in their prescriptions, as if it were officinal in our pharmacopœias. But no such preparation is in them; and the misconception, so very general on this subject, is productive of much uncertainty and inconvenience to the apothecary. The vinum colchici of the pharmacopœias, as already remarked, is made from the dried bulbs, not from the seeds; from the latter a tincture is made; and, as it is one of great power, there ought to be no confusion connected with it.

I have known the seeds beaten into a mass with mucilage (a work of no small labour), and formed into pills, to act as a brisk cathartic, and to give complete relief in facial neuralgia. The acetum colchici of the pharmacopœias, neutralized with magnesia, and holding dissolved some sulphate of magnesia, is recommended by Sir C. Scudamore, in his Treatise on Gout, as the best formula. He says the combination is inoffensive to the stomach, and certain in its effects on the bowels. The dose recommended by him is half a drachm to one drachm and a half; and this, he says, never produces

constitutional nervousness. I have taken two ounces, however, of the acetum colchici, within six hours, at two equal doses, without any other result than an intermitting pulse. A gentleman, labouring under gout, took, on my assurance of the feebleness of this preparation, no less than eighteen drachms of it, in divided doses, every day, for six days, without any obvious effects. Should Sir Everard Home's wine of colchicum ever come into use, and his authority ought to be sufficient warrant for its introduction, the apothecary should keep it in two states, one with the deposit, and the other without it. —*Braithwaite's Retrospect*, from *Dublin Med. Press.*

To cover Pills or Extract of Copaiba with Gelatine.—This process, invented by M. Garot, is exceedingly easy and practicable, and it is surprising that it is not employed more generally in this country, as it much more effectually disguises the taste and odor, and interferes less with the solution of the medicine than the method of gilding or silvering usually practised. It is applicable to every substance capable of a pillular consistence; such as balsam, camphor, musk, asafœtida, mercurial and ferruginous preparations, etc. Two hundred pills can be coated with gelatine in an hour, and will be ready for use after the lapse of two hours. The pillular mass so coated remains soft for a much longer time than according to any other plan. The process is as follows: fix the pills on long fine pins, plunge them into thick purified glue placed in a hot-water bath, then remove them by a rotatory motion, and stick the pins in paste spread out on a slab, so that the pills may remain elevated in the air: as soon as fifty are thus treated, rotate them individually in the heat of a taper, to harden the external pellicle; pull out the point of the pin, and the process is complete.—*Med. Gazette.*

TOXICOLOGY.

Case of Poisoning by Arsenic relieved by the use of Magnesia.—Mr. Lepage, apothecary at Gisors, states the following in a letter to M. Bussy, director of the School of Pharmacy, with a request that it may be laid before the Royal Academy of Medicine.

On the 30th of May, 1846, at six, A. M., Dr. Ardiege and myself were requested, by the Commissary of Police, to visit P. Delamotte, who, it was stated, had poisoned himself the evening previous. We found him suffering severely with pain, and his lips still covered with a whitish powder. On inquiring of him, as to the cause of this suicidal act, he stated that the evening previous, he had murdered a female with whom he had lived in adultery, and in order to escape the hands of justice had swallowed, at 11 o'clock, a large cupful of arsenic dissolved in water.

It appears that Delamotte had eaten a hearty supper previous to taking the poison. He had vomited and purged repeatedly during the night. His present condition is, a small irregular pulse, heat over the body, a sense of constriction in the throat, excessive thirst, horrible pain in the stomach and bowels, urine scanty and high coloured, respiration easy, but the patient is groaning incessantly.

We put in use the new method proposed by M. Bussy, and administered calcined magnesia suspended in water during ten hours (he took about 100 grammes), and under its effect we had the pleasure of observing all the alarming symptoms disappear; the colic ceased, he passed a quiet night, but without sleep, and the next day was convalescent.

During the administration of the magnesia the patient vomited frequently for the first six hours. The matters thus vomited were collected and thrown on a filter, and the transparent liquid was tested by the apparatus of Marsh, and large arsenical spots were produced.

From these results, the reporters are of opinion that magnesia thus given forms with arsenious acid, an arsenite *insoluble in water*, and that its efficacy as an antidote is hence unquestionable.

It is probable that Delamotte swallowed about fifteen grammes of arsenic. As a criminal, he was subsequently removed to prison and continued in good health until the fifth of June, when he was found dead, from hanging himself in his cell. T. R. B.

American Jour. of the Med. Sciences, translated from *Bulletin de l'Acad. Royale de Méd.*

On the Mode of Testing the Presence of minute Quantities of Alcohol. By Robert D. Thomson, M. D., Lecturer on Practical Chemistry in the University of Glasgow.—The determination of the presence of minute quantities of alcohol is a chemical point of some importance, especially in judicial cases. The usual method hitherto adopted for detecting alcohol in mixed fluids, is to subject the fluid suspected to contain it to distillation, at a temperature not greater than that which is required to cause the alcohol to pass over into a receiver and then to judge of the presence of spirit by the vinous odour of the distilled fluid. When alcohol, in the form of gin, whiskey or brandy, etc., has been swallowed, if death takes place within a short period of the introduction of the fluid, the odour of the spirituous liquors will be distinctly perceptible to one inspecting the interior of the stomach, but if a considerable time should elapse, as, for example, a few hours between the introduction of the spirit and death, it is rarely found that the smell can be detected. Again, if the person should die under the influence of spirituous liquors and the stomach were not examined within a limited period, the odour of alcohol might not be perceptible, since as absorption goes on for several hours after death, and as volatile fluids appear to be peculiarly susceptible of rapid absorption, the whole of the alcoholic fluid might be removed from the intestinal canal into the circulation. It has been affirmed that alcohol has been detected in the brain of gin drinkers, but as the mode of testing adopted was merely the impression made upon the nerves of smell, we may perhaps be allowed to doubt the accuracy of the experiment. It has been affirmed that the gin obtained from the brain has been inflamed, and if this were correct, we should then be entitled to quote nasal and ocular proofs of the presence of alcohol in the brain, but as the gin of the shops is so weak that, in its natural state, it will scarcely burn, we may also be permitted to be skeptical in reference to this second proof. These views do not tend to disprove the possibility of the presence of alcohol in the vessels of the brain and other portions of the body, because we know that hydrocyanic acid passes to the very extremities of the body and can be distinctly detected by its odour, until it has been either removed from the system by the combustion of respiration, or simply by exhalation from the lungs. Now alcohol and hydrocyanic acid are somewhat analogous in a chemico-physiological point of view, as they possess a powerfully sedative effect upon the system, are exceedingly volatile, readily absorbable, and require much oxygen to resolve them into simpler forms. For these reasons, it appears highly probable that alcohol may be capable of detection in the vessels of the system when it has been swallowed in large quantities. The experiment could, however, only be made on the inferior animals, and we should require some more definite test than the mere smell of the alcohol.

There are other circumstances, in a judicial point of view, in which it may be of importance to detect minute quantities of alcohol. For example, to distinguish small portions of the liquid preparations of opium. In medicine, there are used, the solution of opium in alcohol; the solution of opium in wine; the solution of opium in alcohol with benzoic acid and ammonia; the solution of opium in vinegar; and, lastly, the solution in water. When these preparations are entire, there is not much difficulty in their discrimination, but if they have been exposed to the air, much of the alcohol escapes, and they may all become analogous to a solution of opium in water. To distinguish those which contain alcohol from those which do not, enables us to divide them into two classes, and thus to simplify the inquiry. For these, and many other cases, where minute detection is necessary, I have been in

the habit, for some years, of employing a method which depends upon a well known fact, the dehydrogenation of alcohol by means of oxygen. For this purpose, the fluid to be tested, if colored, or a mixed one, is to be distilled in the water-bath until one-third of it passes over. Should the liquor contain any acetic acid, this may be saturated previous to distillation with carbonate of soda, in order to remove the vinegar smell, which might interfere with the odour of the subsequent test. Into the distilled liquor supposed to contain alcohol, should be dropped a crystal or two of chromic acid and the liquor stirred. If the smallest quantity of alcohol be present, the green oxide of chrome will begin to be disengaged, and at the same time the smell of aldehyde is distinctly perceptible.

By means of this simple test, it is possible to distinguish a drop of alcohol in half an ounce, and even in an ounce of water. When chromic acid is not at hand, the experiment may be made with bichromate of potash and sulphuric acid. This perhaps affords the most distinct method of performing the experiment, and may be conducted as follows :—Drop in a few grains of powdered bichromate into a small flat glass (which tapers towards the bottom) containing the solution to be examined, and add a few drops of oil of vitriol. If alcohol is present, the green oxide will be observed to be developed on the surface of the undissolved salt, and the characteristic odour of aldehyde will speedily be perceptible.—*Monthly Journal of Medical Science.*

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Condition of the Brain in Persons who die by Strangulation.—Dr. George Burrows, in his work on Disorders of the Cerebral Circulation, reviewed in our last number, makes the following important remarks :—

"It may now be affirmed that the encephalon is not exempt from this law in physics—the gravitation of the fluids to the lowest part of the corpse. The discovery of the operation of this force on the blood, within the cranium after death, suggests a precaution very essential to be followed, when it is desired to ascertain the precise amount of congestion of the cerebral vessels at the time of death. In such cases, a ligature should be placed round the throat of the corpse, and drawn sufficiently tight to compress the cervical vessels, and arrest all flow of blood through them. This precaution will be most required in the examination of bodies where, from the kind of death, the blood may be suspected to remain fluid in the heart and great blood-vessels. The depending or elevated position of the head, during the examination of the body, will not then induce deceptive appearances, which mislead us in our conclusions as to the previous amount of congestion in the cerebral vessels."

This caution, (says the reviewer,) is rendered the more necessary, because the non-congested state of the brain, which has been observed in persons who have been hung or strangled, has been adduced in proof of the iatro-mathematical proposition, (viz., that of a fixed quantity of blood circulating within the cranium). But Dr. Burrows shows that the brain may, or may not be congested, according to circumstances, and these circumstances consist in the mode in which the strangulation is effected, and in the anatomy of the cerebral vessels. He thus accounts for the occasional absence of cerebral congestion in those who have suffered death by hanging.

"When criminals are hung by the executioner, the knot of the rope is usually adjusted on one side of the neck, and it is found, after death, beneath the ear, resting on the mastoid process. It has been often observed, in the dissection of such criminals, that the cheek and integuments on this same side of the head are not near so livid and congested as on the other side. The pressure of the rope has not completely obstructed the return of blood through the external jugular vein on the one side, although it has effectually stopped the current on the other. In such cases, it is probable, that the deep-seated internal jugular vein on the one side has only been partially compressed, and has permitted, to a certain extent, the return of blood from the internal parts of the cranium.

"But there is another still more efficient cause of this occasional absence of congestion of the cerebral vessels after death by hanging; it is the subsidence

of the *fluid* blood after death, while the body is yet suspended, through the cervical vessels which are not completely obliterated by the pressure of the cord. And it should be recollected that there are some channels which are scarcely, if at all, affected by the compression of the rope. These other channels are the vertebral sinuses and spinal plexus of veins, so ably delineated by M. Breschet."

The sinuses of the cranium may also be drained otherwise than through the vertebral sinuses. In examining the bodies of those who have died by strangulation, the great vessels of the neck are usually cut across to get at the thoracic viscera, and then when the head is elevated to open the skull, the blood gravitates and flows from the cut ends, and the blood-vessels, (previously congested,) are rendered comparatively empty. Dr. Burrows further observes, in proof of this explanation, that in other instances, where life has been destroyed by obstruction of the respiration, congestion is usually present.—*Amer. Jour. Med. Sciences*, from *Brit. and For. Med. Rev.*

Case of Fracture of the left Parietal Bone, from the Expulsive Action of the Uterus.—By T. B. Wharrie, M. D., Hamilton.—The body of a child having been found secretly buried near the Calder, it was reported to the Fiscal; when Mr. Jameson, surgeon at Beltshill, and I, were appointed by the sheriff to make a post-mortem examination of the body. There was handed over to us a coarse deal box, nailed up, on opening which we found the body of a female child, wrapped up in some clothes. Before proceeding to dissection, we carefully examined it, and observed no marks of injuries, except that the cranium near the posterior fontanelle had a puffy feel, as if from containing extravasated blood; and, when pressure was made upon the forehead, blood issued from the right nostril. The muscular substance of the body was firm, but the cuticle in parts easily peeled off, as if from incipient putrefaction; from the weather being cold, we conjectured that two or three weeks had elapsed since delivery. The navel-cord was cut and tied, six inches of it still remaining attached to the body. The child weighed seven pounds, and measured in length twenty-one inches. The chest had a flat appearance, and there were no marks around the anus of meconium. On opening the body, we found the lungs of a dark color, with their edges sharp, occupying but a small space in the posterior part of the chest, and not covering the heart or pericardium, and the diaphragm was arched upwards. The lungs, with the heart, being removed from the body, and placed in water, sunk to the bottom of the vessel; both lungs, previously cut into pieces, were then subjected to the same trial, and all of them immediately sunk; none of these portions had the slightest crepitous feel, nor did they emit air-bubbles when pressed; the pulmonary vessels appeared also to contain very little blood. There was no blood in the right side of the heart, but a small quantity was found in the left side, and the foramen ovale was open. We examined the mouth, windpipe, and gullet, and found all of them in a natural state. On proceeding to dissect off the integuments from the scalp, we found on the left side of the head about two teaspoonfuls of blood extravasated under the pericranium, (at that part of the head which felt puffy previous to dissection,) there was also a little blood, though smaller in quantity, effused immediately adjoining this on the right side of the head. On removing the blood on the left side, we discovered a fissure fully half an inch in length, in the edge of the left parietal bone, close to the line of the sagittal suture, and near the posterior fontanelle. There was not the slightest depression of the bones at the seat of injury, nor, on minutely examining the scalp, by shaving off the hair, could we detect any discoloration, or the slightest mark indicating a blow. The brain was rather in a soft state; there was no extravasation of any consequence upon its surface or within its substance, but the extremities of some of the blood-vessels seemed to have given way to a trifling extent. From the size and general appearance of the child, there could be no doubt that it was born at the full period of pregnancy, and it was also quite evident it had not respired, not even feebly. The important question comes to be—What was

the immediate cause of death? I suspect simply the violent expulsive efforts of the uterus, forcing the child forward, and producing severe pressure on the cranium; or it is possible a portion of the navel cord might have fallen down and been compressed. At all events there were no marks by which the woman could be accused of infanticide, nor, as afterwards appeared, of concealment of pregnancy. The mother in her declaration said: "That she was 28 years of age, was never married but had borne three children, her last only still-born, and that its birth took place about a month previous to her examination; that she was in labor from Saturday afternoon till Tuesday morning about 11 o'clock; she was very ill from Monday night, but, until that time, she was only in a lingering way, and there was no person attending her during all the time except her mother, as she had no money to pay for a doctor or midwife; that she knew her mother could do anything that was required, as she had been with women before, and herself when she had her other two children, assisted by neighbours; her mother was the only person present at the time when the child was born; that it was laid on the bed till the old woman hurried out for two neighbors." These neighbors declared they never saw the child move. She further said, that they kept the dead body till Thursday morning, having no money to pay the expense of burying it; her brother made a box, into which it was put, and her mother carried off the box, saying "she would bury it at the side of the Calder till she got 'baubees' to bury it regularly;" but in the mean time it was accidently discovered. On the whole affair being properly investigated, and the precognition taken sent to the Crown Council, the opinion given was, that there ought to be no further proceedings.—*Monthly Jour. of Medical Sciences.*

Poisoning by Cantharides.—The following French case is curious, from the repeated attempts made to destroy life. The accused was a man, aged forty-one years, a carpenter by trade, and of an appearance, gestures, and conversation, nearly verging to idiotism. His attempts were made on a step-brother, named Hervonet.

During May, 1846, Hervonet, shortly after eating some soup, which tasted extremely bitter, was seized with violent pain in the stomach and bowels; he could not pass urine, but with extreme pain, and the quantity discharged was small and bloody. After suffering several hours, he was enabled to sleep, and on waking, found himself much better.

He had no suspicion of the cause of this illness, but during the night of the fifth of July, he was seized with similar symptoms. Two hours previous, he had eaten soup of similar bitterness to the last. This time, his sufferings were more severe and longer continued, and they only yielded after copious draughts of oil and sweet milk, which excited copious vomiting. Even yet he had no idea of any intent at poisoning.

On the evening of the twelfth of July, he found in his soup, a black substance which at first he supposed to be fragments of vegetables. A portion of this adhered to his palate, he detached it with his finger, and examined it by the light, but could discover nothing certain, except that the taste was precisely similar to that experienced in the two previous instances. The next morning, he was impressed with the idea that it was cantharides, and all doubt was removed on showing it to M. Drew, a medical man, who also informed him that two days previous he had seen his step-brother purchasing medicines from an apothecary.

Hervonet denounced his brother to the authorities, and as soon as Poirier heard of the charge, he fled, but was soon retaken. He confessed that he had purchased a blistering plaster on the tenth of July, and mentioned where he had hid it. On obtaining it all the plaster was found scraped off. It was also proved that he had made several purchases of the same nature, and an apothecary deposed, that one of the plasters sold contained two grammes of cantharides.

The character of Poirier was proved to be extremely bad—a thief—of idle, loafing habits, and a burden to his relatives. His father, aged eighty,

had given his property to his son-in-law and daughter, leaving Poirier only an allowance.

The jury found him guilty, and he was condemned to death, but scarcely had sentence been pronounced, before eleven of the jurymen united in a petition for a commutation of punishment. His apparent idiocy seems to have been the ground for this. T. R. B.

American Jour. of Med. Science, translated from *Gaz. des Tribunaux.*

MISCELLANEA.

Abstract of Researches on Magnetism and on certain allied Subjects; including a supposed new Imponderable. By Baron Von Reichenbach. Translated and abridged from the German, by Wm. Gregory, M.D., F.R.S., Prof. of Chemistry, &c.—The most extraordinary work that has been for many years issued from the press, is that, the title of which we have just given. It professes to give an account of the discovery of a "new imponderable," through which we are to realize a clear and satisfactory solution of many problems in the mental and physical constitution of man, which have puzzled mankind from the earliest ages. The statements it contains are, if possible, more startling and incredible than those made by Hahnemann, in relation to infinitesimal doses, or of Elliotson and others, respecting mesmerism. Nevertheless the high reputation of the author and that of his learned translator and annotator, seem to justify our occupying a few pages with an account of the Baron's supposed discoveries. Neither the original work nor the translation has as yet reached us, but we are enabled to collect from the abstracts in *Ranking's Half Yearly Abstract*, for July, and in the *Edinburgh Med. and Surg. Journal*, for April last, a sufficiently full sketch of these revelations to satisfy our readers.

Baron Von Reichenbach thinks he has demonstrated that magnets act on the human body, especially in certain conditions; and further, that he has demonstrated the existence, *in magnets*, of two forces, one which attracts iron and effects the needle, and one which acts on the nervous system, and which he has found unmixed *in crystals*. This new power, which he is disposed to view as the true agent in animal magnetism, he says, "is transferable from one body to another, and is conductible through matter. A body may be, for a time, charged with it, and this is the true explanation of the fact, now demonstrated by the author, that a glass of water, as stated by Mesmer and his followers, may be magnetized by contact with a magnet, although that term is improper.

"But perhaps the most striking characters of this new power are, that it assumes, like electricity and magnetism, a polar arrangement in bodies, and that bodies charged with it are luminous, especially at the poles. The light, it is true, is only visible to certain sensitive individuals; but not only are such persons of tolerably frequent occurrence, but the author has gone far towards demonstrating, that, although invisible to ordinary eyes, actual light, nevertheless, does emanate from the poles of powerful magnets.

"The author finds the new power in many unsuspected quarters, in the sun's rays, the moon's rays, heat, electricity, friction, and, above all, chemical action; and the numerous and beautiful applications which at once suggest themselves, give a tenfold interest to this part of his researches. The human frame, especially the hand, whether in virtue of the incessant chemical changes going on in the body, or independently, is a rich source of the new power."

The new influence which the author thinks he has detected in magnets, in crystals, in light, heat, electricity, and chemical action, is due, he confesses, to the existence of his "new imponderable."

"Magnets of 10 lb. supporting power," says the author, "when drawn along the body, downwards, without contact, produce certain sensations in a certain proportion of human beings. Occasionally in 20, 3 or 4 sensitive in-

dividuals are found; and in one case, out of 22 females, examined by the author, 18 were found sensitive. The sensation is rather unpleasant than agreeable, and is like an *aura*, in some cases warm, in others cool; or it may be a pricking, or a sensation of the creeping of insects on the skin; sometimes headache comes rapidly on. These effects occur when the patient does not see the magnet, nor know what is doing; they occur both in males and females, although more frequently in females: they are sometimes seen in strong healthy people, but oftener in those whose health, though good, is not so vigorous, and in what are called nervous persons. Children are frequently found to be sensitive. Persons affected with spasmodic diseases, those who suffer from epilepsy, catalepsy, chorea, paralysis, and hysteria, are particularly sensitive. Lunatics and somnambulists are uniformly sensitive."

Healthy sensitive persons observe nothing further than the sensations above noticed, and experience no inconvenience from the approach of magnets. But the diseased sensitive subjects experience different sensations, often disagreeable, and occasionally giving rise to fainting, to attacks of catalepsy, or to very violent spasms. In such cases there occurs an extraordinary acuteness of the senses; smell and taste, for example, become astonishingly delicate and acute. The patients hear and understand what is spoken three or four rooms off, and their vision is often so irritable that, while on the one hand they cannot endure the sun's light or that of a fire, on the other, they are able, in very dark rooms, to distinguish not only the outlines, but also the color of objects, where healthy people cannot distinguish anything at all.

The author's first series of recorded experiments refer to the appearance of light, visible only to the sensitive, at the poles and sides of powerful magnets. One of the persons experimented "saw a flame with play of colors, shooting out rays as large as the magnet, that is, about ten inches high; also side flames from each plate of the magnet, and a general weaker light over the whole surface at the junction of the plates." When the memoir was printed he had met with six sensitive persons who saw more or less vividly this luminous appearance; the number, last February, amounted to twenty-three, including not merely girls, but men and matrons. To prove that this was real actual light, he shows that it acts on the sensitive plate of the daguerreotype, and is concentrated by a lens. It gave out no perceptible heat; at least none sufficient to affect Nobili's thermoscope.

The *magnetic flame* is to be distinguished from the *magnetic light*. The former is flickering and does not radiate; the latter radiates strongly. The flame yields like other flames when blown on, and when solid bodies are introduced into it. It would, therefore, appear that the light is distinct, imponderable; but that the flame is probably compound, consisting of a material substance along with the imponderable light. The author proceeds to enter into a long description of the aurora borealis, and of the very similar appearances described by the patients. Without regarding the identity as proved, there are very strong reasons for believing it probable.

He then proceeds to show that in certain diseases, especially catalepsy, an attraction subsists between the hand and a magnet.

"Mlle. N. being in catalepsy, insensible and motionless, but free from spasms, a horse-shoe magnet of 20 lb. power was brought near to her head, when the hand attached itself so to the magnet that whichever way the magnet was moved the hand followed, as if it had been a bit of iron adhering to it. She remained insensible, but the attraction was so powerful that when the magnet was removed in the direction of the feet, further than the arm could reach, she, still insensible, raised herself in bed, and with the hands followed the magnet as far as she possibly could, so that it looked as if she had been seized by the hand, and that member dragged towards the feet. This was daily seen by the author between six and eight, P.M., when her attacks came on, in the presence of eight or ten persons, medical and scientific men. At other periods of the day, when she was quite conscious, the phenomena were the same. She described the sensation as an irresistible attraction, which she felt compelled against her will to obey. The sensation was agreeable,

accompanied with a gentle cooling aura, streaming or flowing down from the magnet to the hand, which felt as if tied and drawn with a thousand fine threads to the magnet. She was not acquainted with any similar sensation in ordinary life." Similar results were obtained in other cases; in one case (the one quoted) a certain amount of attraction was also observed in the foot, but far weaker. It was found that the hand of the cataleptic patient had no attraction for iron filings, did not in the least affect the needle, and excited no appreciable attraction on a magnet, which was counterpoised on the beam of a balance, and brought near to the hand, although it required some force to prevent the hand from rising to the magnet. That is to say, while the magnet attracted the hand, as it were vitally, the hand did not attract the magnet statically.

The author, although strongly prejudiced against the idea of magnetized water being recognizable, was yet compelled to admit what he saw daily in many patients, that they could easily distinguish a glass of water along which a magnet, unknown to them, had been drawn, and this without failure or hesitation. A magnetized glass of water was found to possess the property of attracting the hand of Mlle. N.; this took place whether she was in a state of catalepsy or not.

All sorts of minerals, preparations, drugs, in short, objects of all kinds were then magnetized in the same way as the water, by drawing, or passing the magnet along them, and being tried, was found to act as the water had done, more or less powerfully. Some of these caused spasms over the whole body, others only in the arm, others again only in the hand, and lastly, others not at all. The same substances were then tried in their natural condition, without being previously magnetized. They were still found to act with a power often little inferior to that which they had when magnetized. It was observed that the effect in the cataleptic state was much more distinct and powerful than when the patient was in the normal condition. On comparing the bodies employed, it was found that all those bodies which were clasped convulsively in the hand (the active group) included all loose single crystals, and groups of crystals, with their chief axes parallel, as celestine, gypsum, red and brown hæmatite, &c. The active substances were also beautifully crystallized, and he divides them into three classes: *a*, such as caused the fingers to close on the body with hardly perceptible spasm: *b*, those which caused the hand to be closed with spasm, but did not attract it to follow; and *c*, those which caused the hand to contract with violent spasm, and attracted it also when made to pass near it. For the list of substances employed we must refer to pp. 16, 17, of Dr. Gregory's Abstract.

The general result of these experiments is that distinct solitary crystals appear to possess a power of a peculiar nature, not previously noticed, and apparently dependent on the structure of matter, namely, on the arrangement of the particles. The author found that about one-half the persons in the neighborhood were more or less sensitive to crystals. The crystals should be large, single, with natural acuminations; heavy spar, fluor spar, gypsum, and rock crystal are the best. They must be drawn as near the inner surface of the hand, as possible, five seconds being taken to a streak, and held perpendicularly. The sensation is cool when the streak on the hand is made downwards, and warm and very disagreeable (so as even in some cases to cause spasm) when it is made upwards. The conclusions to be deduced from this section, and which, according to Reichenbach, may be regarded as established, are—

1. Every crystal, natural or artificial, exerts a special action on the animal nerves, feeble in healthy persons, powerful in many diseased individuals, strongest of all in cataleptic cases.

2. This influence is seated chiefly in the axis of the crystal, and being most active at the opposite ends of the axis, is consequently polarized.

3. At the poles, light is sent forth visible to eyes rendered preternaturally acute by disease, especially of the nervous system.

4. In certain disorders, the crystal attracts or solicits the hand of the pa-

tient by a kind of attraction, analogous to that of the magnet for iron. But this force is in many important points altogether distinct from magnetism.

5. The force may be transferred to other bodies which may be charged with it by contact. Different bodies conduct it with different degrees of facility.

6. The force differs qualitatively at the opposite poles; at the — M pole causing a sensation of coldness, at the + M pole, one of warmth. Quantitatively the — M pole (pointing in the magnet to the north) is weaker than the + M pole.

The author then proceeds to show that the system of sensitive persons is affected by terrestrial magnetism. He felt, *à priori*, assured that if a magnet or a crystal produces so decided an effect on the system, the magnetism of the earth, which gives the needle its direction, must likewise influence the animal nerve. Trials were then made on MM. Schuh and Schmidt, surgeons, as well as on many other persons, in different circumstances and at different times. "M. Schuh had, in the house then inhabited by him, the singular custom when he awoke early in the morning of regularly turning himself in bed so as to place his head where the feet had been; on doing this he invariably fell asleep again, and this second sleep, contrary to the usual opinion, was to him far more refreshing than the whole sleep preceding it. If he omitted this, or lost his second sleep, he felt weary all day, and thus this strange custom had become a necessity for him. The author inquired and found that the head of the bed was directed to the south, the feet to the north. He advised the turning of the bed into exactly the opposite position, with the head towards the north, and from that time the necessity for the second sleep never returned, the ordinary sleep was refreshing and sound, and the custom above mentioned at once given up." Seven other much more marked cases are given; they all agreed that lying in any position except from north to south is highly disagreeable, but that from west to east almost intolerable. The cause of these phenomena can only be found in that great magnet which is formed by the earth with its atmosphere, that is, terrestrial magnetism. Reichenbach lays it down as a law, that "terrestrial magnetism exerts on certain persons, both healthy and otherwise, who are sensitive, a peculiar influence, powerful enough to disturb their rest, and in the case of diseased persons, disturbing the circulation, the nervous functions, and the equilibrium of the mental powers." Since terrestrial magnetism is subject to variations connected with the lunar phases, some light is partially thrown on one of the causes influencing insanity. The author likewise shows that his observations regarding the influence of terrestrial magnetism afford a clue to many of the discordant results of the animal magnetism. His next important conclusion is, that the peculiar force of magnets and crystals exists in the human hand, and is analogous to magnetism. When he caused his fingers of the right hand to follow each other in a line down the middle of the inside of the hand, but not in contact with it, all those who were sensitive to the magnet felt either a cool or a warm aura; and that generally more distinctly than in the case of a crystal. Indeed many healthy persons were sensitive to this influence; amongst others, M. Schuh, M. Studer, and M. Kotschy, the African traveller, all healthy vigorous men, the latter a rare specimen of manly vigour and hardy constitution. We have only space for the general conclusions of this section, which are—

1. That the hand, passed over sensitive patients, acts on them like the poles of crystals.

2. That the power which here acts is conductible through all bodies like the force of crystals, and that it likewise resembles this force in its capability of being collected in other bodies, and in its disappearance from those bodies in a short time.

3. That this force is polarized in the human body, as the other is in crystals, and that both are alike uninfluenced by the earth's magnetism.

4. That this force exercises a mechanical attraction on the hands of cataleptics, as does the force of crystals.

5. That this force exhibits beautiful luminous phenomena, visible to the

sensitive, of the same kind and strength as those exhibited by the force of crystals. The author promises to give drawings of these beautiful appearances with a future memoir. It is worthy of remark that Professor Gregory, two years ago, and consequently long before he had heard of Reichenbach's observations, often saw a lad who in the mesmeric state observed flames issuing from the point of his (the Professor's) fingers.

In section four are considered further sources of the new power; the sun's rays are shown by some beautiful experiments to yield it, and that moonlight, although it conveys no heat, possesses a powerful hidden influence similar to that which resides in crystals, magnets, the human hand, and the sun's rays. Heat, friction, and artificial light are other sources of it.

The most important points of section five are the following:

1. Chemical action as well the ordinary kind as that connected with combustion and the galvanic pile, is a comprehensive source of the magneto-crystalline force.

2. The most insignificant chemical action is sufficient to develop it abundantly, to charge surrounding objects with it, to exhibit polarity, to produce light, etc.

3. The magnetic baguet of Mesmer and his followers most probably developed this force in consequence of chemical action.

4. Digestion and respiration, and, in general, the change of matter in the animal body, being chemical processes, are the sources of the magnetic influence which exists and acts in the human frame.

5. The ghost-like luminous appearances that have been observed above graves, although unseen by most healthy persons, do really exist, are of a purely physico-chemical nature, but can only be seen by the highly sensitive.

6. Electricity is also a source of the power which resides in crystals, etc. This is true both of friction-electricity, positive and negative, and of contact-electricity, and even the electric atmosphere is capable of setting this force in motion at considerable distances.

In the remainder of the memoir he shows that all bodies in some degree contain the new force; that they cause heat and cold, and are luminous to the sensitive, but that the light is variously coloured; that the amount of the new force in the hand varies at different hours; and finally, in what manner the foregoing facts may be applied to the preservation of the health.

These supposed discoveries have excited vast interest in Europe, as is shown by the extent to which they have been quoted and reviewed in various journals. Some respectable reviewers have even thought them worthy of credit, and those even who were very justly skeptical, have at least thought them entitled to consideration and examination. Mr. Braid has repeated many of them, and the results of his experiments will be found in the succeeding article.—*American Jour. of Med. Science.*

Clinical Notes taken in the Parisian Hospitals.

Articular Dropsy.—Large doses of tartrate of antimony is a valuable remedy in cases of articular dropsy. Besides the remarkable cases of cure recorded by M. Gimelle, we have just observed another in the service of M. Velpeau at La Charité. It was that of a young female cook, in whom the disease had existed in the right knee for six months, with pain, without fever. M. Velpeau ordered the medicine in a drink, in the progressive dose of 4, 6, and 8 grains in the twenty-four hours. The disease disappeared in fifteen days. The patient only vomited during the first two days.

Cod-liver Oil.—The oil now administered in the hospitals of Paris does not contain one atom of iodine. M. Rayer has just caused an analysis to be made, without a trace of it having been found. It is probable, therefore, that the therapeutic effects of this substance depend on its being purely and simply a fatty body.

Nitrate of Silver Injections in Chronic Diarrhœa.—The chronic diarrhœa which accompanies phthisis or enteritis, or which follows typhoid fever, yields for the most part to the use of injections composed of 10 grains of

nitrate of silver, dissolved in a quart of water. If a metallic syringe be used, care must be taken not to allow its remaining in the instrument any time, or a chemical decomposition will take place. The injection may be retained or returned without any inconvenience, the antiphlogistic effect of the remedy is produced in either case. This practice has never given rise to accident. (*Guérard.*)

Frictions of Croton Oil in Phthisis Pulmonalis.—In cases of pulmonary phthisis, the patients are much benefited by abundant frictions on the chest with croton oil. Twenty-four drops may be prescribed for each friction without danger. The patient should drop it gradually on the chest, and employ friction with the palm of his hand. Pustules do not form on the hand, this region having no follicles, and the epidermis being very thick. This practice considerably relieves the dyspnœa, the nocturnal restlessness and fever; but it has the inconvenience of being expensive, especially in pauper practice. (*Rayer.*)

Sulphate of Iron in Chlorosis.—The sulphate of iron being a more soluble preparation, is more useful than the subcarbonate. It may be given in the following form: sulphate of iron, 18 grains; distilled water, 6 ounces. A table-spoonful to be taken morning and night. Each dose contains a grain and half of the salt. (*Briquet.*)

Paralysis of Sensation.—This form of paralysis is less dangerous than that of motion, inasmuch as it is cured with less difficulty. In fact, it is almost always curable, and generally follows hysterical affections. (*Cruveilhier.*)

Typhoid Deafness.—It is rare that the deafness which succeeds or accompanies typhoid fever is not cured in the end by the efforts of nature alone. Hence it does not demand a special treatment, unless accompanied by otorrhœa. (*Rostan.*)

Mercurial Ointment and Bleeding in Variola.—In variola it is impossible to recommend too much the mask of mercurial ointment, rendered solid by means of starch powder, and applied once or twice a day. A thick layer of this substance should be spread with the fingers on the forehead, cheeks, eyelids, ears, &c. Under such circumstances the pustules abort in these places; the eyes are perfectly preserved by it; the face, nose, and lips do not undergo that horrible swelling so common in confluent smallpox, and the patients feel refreshed by each application of the ointment. It is truly a precious remedy, not only as a means of preventing cicatrices, but as a safeguard to the eyes, while it diminishes the smarting pains so frequently present. (*Briquet.*)

We have frequently seen these results in the service of M. Briquet. There is, however, another point to which we are desirous of directing attention;—we allude to the importance of repeated bloodletting in the variola of adults. We have lately seen two robust young men fall victims to smallpox at La Charité after a week's illness. Because bleeding in children has not been followed by good results, medical men are afraid to employ it in the adult. But in the hospitals of Italy we have seen bleeding generally practised in the variola of *adults*, especially at its commencement, not once, but four, five, and six times, always with benefit. It is not blood-letting, but the disease which kills, in cases which go badly. Bleeding can only facilitate the march of the eruption. Some have feared purulent absorption, but this is a theory. In one of the two patients of whom we have spoken, several vaccine inoculations on the forearm were made at an early period, without any effect.—*Month. Jour Med Science*, from *Annales de Thérapeutique.*

Funeral of Professor Tommasini.—The funeral of the late Prof. Tommasini is said to have taken place recently at Parma with imposing splendour. The whole of the court, and more than three hundred families of distinction, were present at the ceremony. The members of the various medical faculties, and all the dignitaries in the army and in the state, were among the followers. The leaden coffin was borne to the church of the Campo Santo by the students of the Faculty of Medicine. The funeral took place at night, and as the procession passed through the streets, the front of each house was illuminated

by torches, the last testimony of the sorrowful respect and gratitude of a nation.—*London Med. Gaz.* from *Gaz. Med.*

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Pettenkofer's Adhesive Plaster.—Pettenkofer employs the oxide of calcium (lime) instead of the oxide of lead, the former being perfectly harmless, while the latter is sometimes injurious to the system; hence, instead of an oleate and margarate of lead, he obtains an oleate and margarate of lime. The lime-soap is, however, only the vehicle for the adhesive material—boiled turpentine. Turpentine purified in this manner is very adhesive at the temperature of the skin, no longer emits any volatile oil, and is perfectly insoluble in water. One part of lime-soap is mixed with half a part of turpentine, and with one-eighth of tallow. These must be boiled in water till they fuse into a homogeneous mass, which must be subsequently treated with cold water. If any fragments of the lime-soap remain undissolved, the mass must be strained through a woolen cloth. In boiling water the lime-salt does not fuse, but merely softens, but in boiling turpentine it dissolves perfectly and readily. On cooling, the turpentine and the lime-salt dissolved in it, solidify together.

To prepare the lime-soap mix ℥ j.–3 ij. of freshly-burned lime, ℥ vj. of water, ℥ vj. of olive oil, and expose them to a temperature of 200–212° F., stirring them with a wooden rod, and occasionally replacing the water lost by evaporation. In the course of from eight to twelve hours a yellowish-white lime-soap is formed, which must be removed from the water and dried.—*Ranking's Abstract.*

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Medical Controversies.—Dr. Cheyne remarks, in reference to a work which he wrote against a treatise by M. De Moivre, that, "Being written in a spirit of levity and resentment, I most sincerely retract and wish undone, so far as it is personal or peevish, and ask him and the world pardon for it, as I do for the defence of Dr. Pitcairn's Dissertation on Fevers against the late learned and ingenious Dr. Oliphant. *I heartily condemn and detest all personal reflections, all malicious and unmanly terms, and all false and unjust representations*, as unbecoming gentlemen, scholars, and Christians, and disapprove and undo both performances, as far as in me lies, in everything that does not strictly and barely relate to the argument."—*Life of Dr. Cheyne.*

Many modern controversialists of the medical profession might profit by the example of this candid old physician of the seventeenth century. Nothing can more strikingly show the absurdity of indulging in violent controversies on medical subjects, than the utter indifference of another generation to them, and the complete oblivion into which they sink in the course of a few years. But medical writers are of an *irritabile genus*; and it is a rarity to meet with such an example of candour and good feeling as that shown by Dr. Cheyne.—*London Med. Gaz.*

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Secret of Success in Medical Practice.—Skill and art alone are not sufficient. He (a medical practitioner) must be particularly mindful of his conduct. It is this which recommends him to the public, and creates confidence; for as the generality of people are incompetent to pronounce on his science, it is natural for them to take the measure of his ability from the measure of his conduct. By force of conduct alone, a physician, of very moderate talents, may become the favorite of the public; and without it, the most skilful professional man remain unnoticed and unappreciated.—*London Med. Gaz.* from *Hufeland.*

OBITUARY.

Death of Dr. Sinkler, one of the Editors of the Southern Journal of Medicine and Pharmacy.—With feelings of unmingled grief we announce to our readers the death of one of the late editors of this Journal, Dr. Seaman D. Sinkler. Attacked, for the first time, and while in the apparent enjoyment

of health, and in the discharge of his professional duties, in November last, with hemorrhage from the lungs; he rapidly fell a victim to that most inexorable of human maladies, phthisis, and expired on the 19th of January, 1847, in the 31st year of his age.

To those who knew him, eulogy from us would be useless. His manly virtues, mental acquirements, professional learning, and zeal, caused him to be respected and loved wherever he was known. After a severe course of study in this city, Philadelphia (at whose university he received his degree of M.D., in 1837), and Paris, Dr. Sinkler commenced the practice of his profession in Charleston, in 1840. His career here was marked by unusual success. As a surgeon he had already performed many of the more important operations; as a physician he was kind, attentive, prudent without being timid, and skilful, and his devotion to his profession, in every branch, was unbounded and entire.—*Southern Jour. Med. and Phar.*

Death of Professor Tommasini.—We have this week to announce the death of the celebrated Italian Professor, Tommasini. He was born at Parma, in the year 1769, and died in that city on the 26th of November last, in the 77th year of his age. Professor Tommasini had for many years enjoyed a European reputation; and he was well known as the originator of peculiar medical doctrines which now form the basis of Italian medical practice. We hope hereafter to be able to furnish some particulars of the life and labors of this eminent man.—*London Med. Gaz.*, Dec. 25, 1846.

Death of M. Labat.—At Nice, on the 16th of January, in the forty-fourth year of his age, M. Leon-Mirza Labat Khan, Doctor of Medicine of the Faculty of Montpellier, and Chief Physician to the Shah of Persia. This gentleman, well known in the literary world, acquired celebrity from his travels in the two Americas, Africa, Greece, Turkey, the Holy Land, and Egypt, where he was made Chief Surgeon to the Viceroy. He was for four years Chief Physician to the Shah of Persia, who among other honors created him Mirza, a rank only inferior to that of Princes of the blood. M. Labat was the author of several works; among others, of a Treatise on Rhinoplastics, a History of Mehemet Ali, a Treatise on Medicine and Hygiene among the Arabs, &c.—*Ibid.*

Death of Joseph Hume.—On the 18th of October last, at Thornbury, in his 91st year, Joseph Hume, Esq., for many years a scientific and practical chemist in London, and corresponding member of most of the learned societies of Europe. Mr. Hume was well known as the discoverer of an improved method of detecting arsenic. He first introduced what is called the silver test, which is still designated Hume's test, and is much employed by toxicologists.—*Ibid.*

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ERRATA.

On page 370, in the notice of Annals of the Lyceum of Natural History, 2d line of the article, for "Grodeph Agous" read "Geodephagous."

Dr. Batchelder on Tumour, page 30, sixteenth line from the bottom, for "jugular fascia" read "jugular fossa."

Page 32, seventh line from the top, for "body inclined," &c., read "head inclined," &c.